/334 cont./

241 243 The Chiriguano who is getting ready to sow takes care to hoe his field and to rid it of all weeds. For this he uses /335/ a shovel, which I shall describe, in part from Campana 243 (p. 98), not having seen this instrument whole.

241 412 [824] The shovels (sipe of the Chiriguano, even not so long ago, were entirely of wood, preferably wood of the urundei (Astronium urundeuva F. Allemao) or of the palm siripa. Although narrower and longer, they resembled those of our bakers. The edges were straight, almost parallel, and only the cutting edge was slightly rounded at the sides. Toward the top they ended in a point, a [824] kind of embryonic handle, which was lengthened by a stick to which it was attached with ties made of churqui (Nilotica farnesiana), of lianas, or toboroši fibers. The two shovels examined by Campana measured 70 centimeters in length and 15 in width; one of them, however, was less wide at the top than at the bottom by several centimeters (Fig. 2).

Fig. 2. Shovel (sipe) made of wood, without its handle, formerly in use among the Chiriguano (from Campana, Pl. VIII, Fig. 1).

If the Chiriguano have abandoned the ancient wooden shovel, they have nevertheless faithfully kept the long handle to which it was attached and which permitted them to work the soil without having to bend over. A remark of psychological order becomes necessary in this regard. The Chiriguano [439] could well have acquired in the Syrians' stores, where they are available, shovels already provided with handles and ready to use. If they felt the need to modify the handle and to give it the traditional form, it is because it did not correspond to the movements and position of the body and hands which an age-old tradition had ingrained.

In each human group all manual labor requires certain set gestures to which, to a certain extent, the tools are adapted. This explains the variations these exhibit from country to country and even from tribe to tribe. With regard to this, Professor

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Mauss used to cite to us the following example: during the great war the French soldiers did not much like using English shovels different from their own, and vice versa. The Chiriguano I have seen laboring on military roads in Bolivia handle our shovels exactly like any European laborer; but back home, when it is a question of working a field, they return immediately to the ancestral gestures and are constrained to adapt the form of their instruments to them.

The handle fits into a handgrip carved out of a small block of wood and set in with the greatest care. The latter generally takes the shape of a crescent on which the hand rests comfortably. The handgrips with an elegant curve, which gave an aesthetic character to the ancient spades, have become very rare. In the course of /336/ my trip I was able to acquire only two shovel handles which were provided with them. One comes from Ibopeytí (Fig. 3) and the other was made for me by an old Indian of the Ivu mission. The workmanship of this latter specimen is careless, but it reproduces fairly faithfully the ancient models (Fig. 4).

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The use of the shovel among the Chiriguano probably dates back only three or four centuries. This instrument was unknown in ancient Paraguay where our Indians came from. The borrowing which could be presumed a priori has been confirmed by the discovery in the Quebrada de Humahuaca of wooden shovels similar in every detail to the ones I

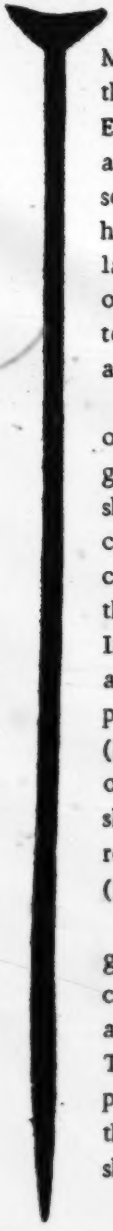

Fig. 3. Shovel handle. Prov.: Ibopeytí. (1/11 nat. size.)

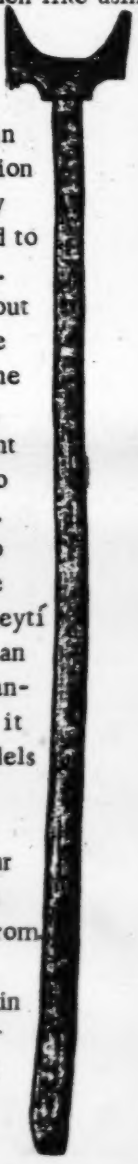

Fig. 4. Shovel handle. Prov.: Ivu. (1/8 nat. size.)

/336 cont./

241 have described here. These finds were made in the ruins of
412 the Alfarcito and of the Pukará de Tilcara (Debenedetti, 4,
172 Fig. 17 and p. 32) and at the Huerta in the same Quebrada de
243 Humahuaca. Numerous wooden shovels have been dug up at La Paya (Ambrosetti, 6, Figs. 236-237, pp. 457-458), and Ambrosetti supposes with justification that they were hafted like those of the modern Chiriguano. Debenedetti (1, p. 35) obtained a specimen of this instrument at Kipón in Salta province.

[171] This type of shovel is particularly well represented in the archeological material of the Chilean coast. Numerous specimens have been found in Calama, Chiuchiu, and Pica in Tarapacá province (Boman, 2, Vol. II, pp. 731-732 and Plate LXVIII a; and Uhle, 3, pp. 15-16 and Plate I).

[171] The half-breeds and Indians of the Bolivian altiplano still work the earth today with a spade which in no way differs from that of their ancestors; moreover, it shows great similarity /337/ to the wooden shovel of the ancient Chiriguano (Chervin, p. 216, Fig. 120).

241 Nordenskiöld (9, pp. 30-32), studying the distribution
412 of this cultural element, established that it was peculiar to
171 the Andean zone and the adjoining regions. The Chiriguano
243 shovel nonetheless has a characteristic feature for which we should look in vain on all the specimens found inside the boundaries of the Inca Empire: this is the crescent-shaped handgrip. It corresponds quite precisely to the crutches terminating the oars in use among the tribes of Brazil, Paraguay, and the Guianas and on which the paddler puts his hand flat.

241 The Chiriguano formerly lived in a region rich in rivers and
412 streams, and they probably made use of paddles of this type to
174 go up or down them. Once settled at the foot of the Andes,
243 the resemblance between their former /Fig. 5 appears here/ oars and the shovels they saw in the hands of the Chané or the Chicha must have struck them; and they naturally sought to adapt to the new instruments this detail of structure whose convenience paddling had shown them. Such a hypothesis is not too adventuresome, for do we not have in the Chaco some shovels which have exactly the appearance of oars? (On this subject see the Ashluslay shovel published by Nordenskiöld, 9, p. 30, Fig. 1.)

/345 cont./

433 224 198 Outside these official expeditions they doubtless used to hunt for pleasure or simply to interrupt the monotony of their menu.

224 411 [223] Quadrupeds were killed with arrows with lanceolate tips, originally of wood, today of iron (Plates VIII and IX, 2); small game, with arrows tipped with a barbed wooden rod (Plate IX, 3-5). Birds were taken in traps or felled with a special arrow having a splayed ferrule (Plates X-XI).

224 [231] Anyone who has seen the little dogs of the Chiriguano Indians, with elongated /346/ muzzle, pointed ears, short hair, and arched tail will ask with surprise how animals so miserable, stupid, and snappish could have been trained to render service to man. Nevertheless, such seems to have been the case. For hunting the peccary, for example, the Indians employ the dogs, who track them and /Figs. 12 and 13 appear here/ force them to hide in their dens, from which they are smoked out and felled with blows of a stick when they try to run away. At least this is how the inhabitants of the village of Saladito (upper Pilcomayo) told me they had killed a peccary which they showed me at the time I was there.

433 224 184 For the modern Chiriguano, hunting has lost its reason for existing as an activity having an economic character, except perhaps /Plates VIII, IX, X, and XI appear here/ /347/ /Fig. 14 appears here/ for those of this nation who live in the region of the upper Pilcomayo. At least this is the impression I had after examining their huts: the bedsteads or wooden cots were often covered with peccary skins and the old deerhorn awls (Fig. 12) numerous enough to be able to be exchanged for a trifle. The relative abundance of these objects proves that among these Indians hunting has not been relegated /Fig. 15 appears here/ to the rank of a simple sport and that it keeps, at least in part, its past importance. The contrast is striking if one then goes into the zone of the Franciscan missions: there, more peccary skins, more perforators made of deerhorn, more ostrich feathers. In the villages of the upper Pilcomayo there is no cabin, poor as it may be, in which a bow and a bundle of arrows are not slipped

[352] [412] [799] [411]

[Text Continues on P. 89]

1: Métraux--82 E-5 (1929) 1930 SF10 Chiriguano SF10
Chane SF8

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Fig. 12. Deerhorn awl (wasu-pirasa). Formerly the Chiriguano used them to pierce the lower lip of their children. Prov.: Saladito. (1/2 nat. size.)

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Fig. 13. Bow of the Chané Indians. Outside surface semicircular; inside surface flat. The bow is reinforced with casings of deerskin (?). Prov.: Tuyuntí (Salta Prov., Argentine Rep.). (1/7 nat. size.)

/364 cont./

273 life of the individual or the community is associated with this beverage. The divine principle which kāwi has in it does not take away its secular character; and, while one gets drunk on it during the festivals, nothing prevents washing down meals with it at the time when the corn ripens. As a sign of [574] hospitality every stranger is invited to empty a calabash full [576] of it; and the compliments he addresses to the wife of his host fill his heart with pride.

527 The Indians always appreciated the liking I showed
293 /Plate XIV appears here/ /365/ for kāwi, and my old friend
[123] Karnapadyú did not fail to recall the big vats full to the brim to persuade one to return to celebrate Easter with them, or, if you like, the corn harvest, since these two dates coincide more or less. Such promises /Fig. 29 appears here/ could not remain without effect, and Karnapadyú was not at all surprised to see me arrive shortly before the festival.

The greatest animation prevailed in the village of Carurutí, formerly so calm. Men came and went, bending under enormous loads of wood. All the urns were lined up in front of the huts and buried to a third of their height (Plate XIV, 1).
527 For a long time big piles of corn had already been heaped up
273 in the village, which all, big and small, men and women,
243 /Fig. 30 appears here/ were actively engaged in husking.
● [412] Some used their fingers, others knives or a pointed stick. Not
[413] one had thought of the so practical instrument used by their ancestors: a small wooden peg with a leather loop to put two fingers through. It is curious to note that such a simple object fell into disuse; an old man still sold me a specimen made of iron but a close copy, so to speak, of the wooden prototype, of which it reproduced the smallest details (Fig. 29).

273 Now the hardest work begins: the grinding of the kernels. Day and night the dry noise of the pestles crushing the corn [461] resounds in the village. Often, to get the chore over more quickly, three women group around the same mortar and with surprising speed raise and pound their pestle without a single [415] error in rhythm interrupting their laborious work. Once ground, the corn is sifted in an urumpesa or large-meshed sieve (Fig. 31). The rather coarse flour is poured into large urns filled with water.

I: Métraux--116 E-5 (1929) 1930 SF10 Chiriguano SF10

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Fig. 29. Iron peg with leather handle used for husking ears of corn. Chiriguano. Prov.: Saladito. (1/2 nat. size.)

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Fig. 30. Chiriguano mortar (anguá) made of urundey wood (Astronium urundeuva Fr. Allemao), with its pestle. The lower, recessed part is buried in the ground. Prov.: Ivu. (1/15 nat. size.)

/365 cont./

273 The preparation of chicha is not play: it is necessary not only /366/ to grind an enormous quantity of corn, but again to go
484 ceaselessly to get water, often at a great distance. At Cururutí
482 the nearest potable water was at the bottom of a ravine of particu-
273 larly difficult access. The women were constantly going there with an îru (Plate XVII, 1), which they carried on their backs in a net (añapoka) held on the forehead by a strap. They would fill

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Fig. 31. Woman sifting corn which she has just ground in the mortar beside her. This flour is to be roasted, then chewed to serve as ferment for kāwi. Cararutí. (Photo. A. M.)

484 the jug and, loading it with difficulty, would go back up the
482 steep slope doubled over under the weight. So as not to lose any
273 time, these hard-working creatures would take along a calabash full of ground corn which they continually chewed.

273 The ground corn is cooked in water and constantly stirred
412 with flat sticks whose edges used to be cut out with a certain artistic care in olden days (Fig. 32). Today a kind of oar (Fig. 33) or the scapula of an ox (Fig. 34) fastened to a long handle replaces the ancient utensils in which was manifested so well the Chiriguano tendency to decorate even the most humble objects.

[178]
[237]
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[For plate XVII, See category 116, P. 127-- Analyst]

/366 cont./

293 126 It is not so easy as one thinks to observe in detail the preparation of kāwi, and I am still at a loss to describe the stages in their exact sequence. This difficulty is due to the fact that kāwi is prepared over several days (generally three or four), and it is /Plate XV appears here/ /367/ difficult to be on the spot all the time so as not to miss any detail. Besides, as different families do not begin to prepare kāwi at the same time, confusion results; and it is hard to know at what point of the operation one finds oneself. Apparently I am not the only one to have come up against this obstacle, for it is enough to read the various descriptions devoted to this important occupation to become aware that they are far from agreeing.

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293 462 At the moment when the water is at the boiling point in the big vats, the burning pieces of wood and the live coals are scattered, and the corn flour is poured in, being stirred vigorously so that it will not form lumps. While this operation is performed, other women have pounded fine a certain quantity of corn, sifted it, winnowed it to rid it of any impurity, then roasted it in a large potsherd. As this flour is taken off the fire, the women chew part of it and spit this into a calabash. This paste impregnated with saliva is called temisu. According to Nino (p. 248), the Indian women mix the temisu with the corn broth which is cooking in the vats and with which they fill a pot. The woman who busies herself with this mixture (umopirai) allows it to fall back in from a certain height "to give it sweetness."

[412]

Fig. 32. Sticks for stirring the kāwi while it is cooking. No. 1 comes from Tigūipa; No. 2 from Ivu... Nos. 3 and 4 from Saladito (upper Pilcomayo). (... nat. size.)

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The umopirai is added to the kāwi, which from this moment on is subjected to intense cooking. A large, bright fire is lighted around the vat containing it and burns day and night; the women go to stir it from time to time to keep it from sticking.

At night the village of Carurutí has a strange look: over the open square in front of the huts high flames rise, against which are outlined in black the silhouettes of the women who, busy and hard-working, do not take time to sleep. The next morning the fire is allowed to go out and the kāwi to cool. It is then decanted into vessels of smaller dimensions, and all the women, including little girls, assemble to take handfuls of the marc and chew it, one trying to outdo the other. These balls, sticky with saliva, are spit back into the vessel. A rather large amount of cold water is added to the kāwi, and right afterward comes the bottling, if I may so express myself. The kāwi is strained through a very fine-meshed sieve. The marc, or siripi, /368/ is thrown away or used again. The beer, or pale wine, is distributed into vessels which are carefully closed with a calabash or bowl, and this liquid is left to ferment for two or three days. So that it may be completely protected from the air, the line of contact between the vessel and its cover is smeared with clay.

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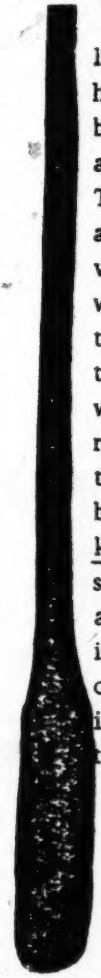

Fig. 33. Oar for stirring kāwi during cooking. Prov.: Pípi. (1/9 nat. size.)

Fig. 34. Shovel ending in an ox scapula which the Chiriguano use for stirring kāwi. Prov.: Pípi. (1/10 nat. size.)

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415 surmounted by two nipples, remains of stylized ears. These protuberances can be perforated and allow a suspension cord to pass through, which permits hooking the bowl to a beam of the hut (Fig. 41).

Spoons

● 412 171 172 Spoons are very common among the Chiriguano. Their form connects them closely to those which have been made known to us by the excavations carried out on the Bolivian altiplano and in northwestern Argentina. It is among the ancient populations of this region that we must seek the origin of this cultural element (on this subject see Nordenskiöld, 9, pp. 91-92), of which the Chiriguano have faithfully kept the primitive aspect and even certain peculiarities such as the indentations of the handle which /Plates XIX-XXI appear here/ /375/ are seen on one of our specimens and on one discovered in the Puna de Jujuy (Pucara de Rinconada) by Boman (2, Vol. II, Plate LIX, Fig. 142).

412 237 824 Beside these spoons, whose use spread under the influence of the civilized peoples of the west, the Chiriguano kept the most rudimentary forms of this utensil: the valves of a fresh-water mollusk (anodonta) (in Chiriguano: inta) are often used by them to eat liquid dishes; the shell of the fruit of a bignoniacea (?) opened lengthwise also appears in the north of the Chiriguano territory as the survival of a time when spoons were still unknown to them (Fig. 44).

412 [171] Some small calabashes, ovoid or round, with a jutting peduncle, can, after being cut through the middle, replace wooden spoons to advantage (Fig. 45). It was in this natural form that the spoon spread in tropical America where Andean influence did not make itself felt. The Chiriguano do not disdain using these half-calabashes to dip into the bean pot or the meat broth. Calabashes like the one of Figure 46 /see p. 139/ take the place of ladles.

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Figs. 42-43. Wooden spoons (karuha or iwira-karu). No. 42 comes from Caruruti and 43 from Nawirenda. (1/4 nat. size.)

Fig. 44. A bignoniaceous or an asclepiadaceous fruit whose shell cut in half is utilized by the Chiriguano as a cup or spoon. Prov.: Caipipendi. (2/5 nat. size.)

Fig. 45. Calabash cut in half to serve as a spoon. Prov.: Macharetí. (1/4 nat. size.)

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Fig. 46. Ladle carved out of a calabash. Prov.: Tintapaw (upper Pilcomayo). (1/7 nat. size.)

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Fig. 47. Reserve calabashes hanging in a net inside a Chiriguano hut. Ibopeyti.

1: Métraux--140 E-5 (1929) 1930 SF10 Chiriguano SF10
Choroti SK6
Araucanians S64
Tupi-Guarani SL6

/377/

Wooden Bowls and Basins

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The Chiriguano also use wooden bowls (Fig. 49). I do not know whether they make them themselves or receive them from the half-breeds of the /Fig. 48 appears here/ San Luis region. In this latter case the Chiriguano of the San Luis (Entre-Rios) region would be the only ones to make them. In Tarija /Figs. 49-50 appear here / where these bowls are much sought after by the half-breeds, they were indicated to me as coming from that zone. The rare wooden bowls which /378/ I saw at Caipipendí had been bought by the Chiriguano in the course of their trips. The same origin must be attributed to the wooden troughs found among the Chiriguano who live near the Quichua half-breeds of Tarija department. These basins are used for washing food and also as bathtubs. The Choroti have wooden dishes (Nordenskiöld, 9, Fig. 20, p. 88) which have a shape very similar to that of the trough reproduced here (Fig. 50) and which doubtless were introduced among them either by the ancient Quichua or by the half-breeds. Among the Araucan of Argentina wooden basins are found, which are similar in every detail to those of the Indians and half-breeds of Bolivia and the specimen pictured here.

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Chapter V

Tools of the Chiriguano

C 412 178 [179]

The work tools the Chiriguano use nowadays are almost all of European manufacture. Here and there the ancient forms were kept when stone or bone were replaced by iron. Witness the adze of Plate XXII /see p.143 / which constitutes a curious survival of the eared or T-shaped ax certainly adopted by the Chiriguano after their migration and their establishment at the foot of the Andes. This type of ax is unknown to me from any other Tupi-Guarani tribe and is rare in the area occupied by the different nations belonging to this linguistic family (see Rivet, 1, pp. 149-155).

T-G [412] [184]

/378 cont./

412 114 171 178 The specimen I am publishing here was still giving good service to its owner, who gave it to me with regret and only for a large sum of money. The presence of the eared ax among the modern Chiriguano invalidates the allegation of Nordenskiöld (14, p. 120), who places it among the cultural elements which have completely disappeared in South America. It survived [181] thanks to the prodigious conservatism of the Indians. I am convinced that several of the objects whose disappearance is attested to by Nordenskiöld will perhaps be found in some tribe now living, when we have more abundant ethnographic material from South America than we now have at our disposal.

412 171 Another very interesting peculiarity of this ax is the bent shape of the handle, to which the blade is securely fastened with leather thongs. The distribution of the bent-handled ax has been traced by Linné (2, p. 202). Few tribes of South America have continued to use it up to our day. They are: the Colorado of Ecuador, the Tukano /Tucano/, Tariana, and other tribes of the /Plates XXII and XXIII appear here/ /379/ Caiary-Uaupés, the Tehuelche, and the modern Quichua /Quechua/. Among the Indians of the Caiary-Uaupés the tool lost all practical value and finally became a simple dance accessory (Koch-Grünberg, 2, Vol. I, Fig. 225, p. 350). /Fig. 51 appears here./

The bent ax has been found archeologically in Peru (Chuquitanta: Marquez Valley near Lima) and in Casabindo in La Puna de Jujuy (Argentine Republic). The specimens from Peru are designated as being hoes, which is possible. However, I shall call attention to the fact that the Chiriguano specimen from Caipipendí is exclusively a carpenter's instrument, which the Indians use for cutting the pieces of wood from which they make their furniture or weapons. /Fig. 52 appears here./

Figure 51 shows how modern axes of the simple neolithic ax type can be hafted exactly like their stone prototypes. The similarity of this ax to the stone ones used up to today by the Guayaki extends to the somewhat arched shape of the handle and to its slightly swollen upper end (La Hitte, Plate IV, 9).

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1: Métraux--143 E-5 (1929) 1930 SF10 Chiripuno SF10

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Plate XXIII

... iron blade has the form of the T-shaped axes of ancient Peru. Prov.: Caripendí. (1/3 nat. size.)

Stone axes of the ancient Chiriguano. The first of the eared axes, Nos. 1 and 10, comes from Ibopeyti, the second from Ivu. The axes with a complete groove (Nos. 2, 3, 5-9) were collected in the Caipipendi Valley, with the exception of no. 4, which was acquired in Ivu. The simple neolithic ax, No. 11, comes from Caipipendi. (1/3 nat. size $\frac{2}{3}$.)

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Ethnos--1944 8-5 (1939) 1950 SF10 Chiriguano SF10

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412 191 Still hafted in this way are the stone axes of the Indians of the upper Xingú (Steinen, 2, p. 107) and the Kaingang /Caingang/ of southern Brazil (Nimuendajú, 15, Fig. 16, p. 30) and the iron cutting tools of the Motako-Vejos (Nimuendajú, 15, Fig. 70, p. 44) and the Yamana (?) of Tierra del Fuego (id., 14, Fig. 45, p. 67) which replaced the ancient stone celts.

172 412 Plate XXIII /see p. 144/ reproduces a series of stone axes coming from the region of Caiuipendí. Ivu, and Dupeyté. The Caiuipendí axes are all provided with a groove. Of the two axes with beels one was found at Dupeyté and the other at Ivu.

Fig. 97. Stone roller used as a grinder on a flat stone. Archeological piece found at Ivu. (1/4 nat. size.)

Fig. 98. Iron ax of the type called simple neolithic ax, provided with a handle like the ancient stone axes. Prov.: Caiuipendí. (1/8 nat. size ¾.)

/383 cont./

323 Chiriguano woman will never be seen making one single vessel at a time: since before continuing she must wait until each one of the parts making up the piece of pottery is dry, she occupies this interval by beginning another vessel, which will dry while she works on the first one again.

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Figs. 57-58. Vessels (yapepó). The rolls of clay of which they are composed are still apparent and constitute a rudimentary ornamentation. No. 57 comes from Caruruti. No. 58 from Yacuiba. (1/4 nat. size.)

323 /384/ When she judges that the bottom has taken on some firmness, she rolls between her hands a roll to which she tries to give a regular diameter. Then she applies it on the base, forming a perfect circle. She cuts off the part which extends beyond the junction point. Next she flattens the roll with her hand, the compression being made from inside to outside, with the back of the left hand and the right palm. When the whole periphery has thus been raised, she evens off the edge, filling all the depressions with pieces of wet earth. Then she smooths the outside of the vessel with a stripped ear of corn and a splinter of bamboo. These two instruments are placed beside her and frequently dipped in water so that the earth does not stick to them. The inside surfaces are polished with the valve of a shell (anodonta) (Plate XXIV, 2). The raw clay, once it is shaped, is supple and resistant like leather. Vessels can be

1: Métraux--153 E-5 (1929) 1930 SF10 Chiriguano SF10

Plate XXIV

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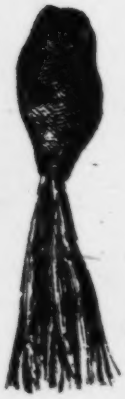

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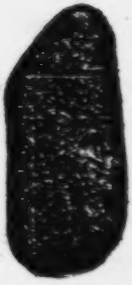

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Accessories of a Chiriguano potter. -- 1. Brush made of feathers held together with wax. Prov.: Ibopeytí. (Nat. size.) -- 2. Valve of a fresh-water mollusk (inta), used to smooth the inside surface of the vessels. Prov.: Ibopeytí. (1/2 nat. size.) -- 3 and 4. Stones used for polishing the exterior and interior surfaces of vessels before firing (intankua). These two stones were found inside a funerary urn in Cararutí. (2/3 nat. size.) -- 5. Excrescence formed by an insect on the branches of trees of resinous species, which the Chiriguano utilize for tracing out black and shiny figures on their vessels (tarawirisi). Prov.: Ibopytí. (± nat. size.)

/467 cont./

302 The women never cut their hair according to the custom of the other Indian women of the Chaco, so they have heads of long and remarkably soft hair. They gather their hair together [301] on the nape of the neck by means of a red or blue ribbon, which they knot on the forehead after passing it around the head (see Plate VI, 1 and 2 /see p. 73/).

302 Chiriguano women are extremely meticulous about their 515 hair and wash it nearly every day. For soap they use ñitira seeds, 824 412 388

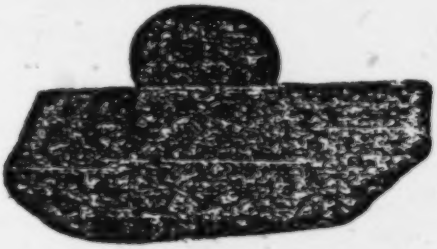

Fig. 122. Chiriguano stone mortar for crushing ñitira seeds. Prov.: Ivo. (About 1/4 nat. size.)

which they crush in a little mortar (Fig. 122) especially intended for that use. The ñitira seeds, rich in saponin, lather easily.

302 For me it was always a pleasant spectacle in the morning to see the women come back from the river with their hair twisted on the front of the head and fastened into a conical chignon. They would let it dry, then would begin to comb it slowly until it was soft and shining.

412 303 184 Two types of comb coexist among the Chiriguano. On the upper Pilcomayo in the Igüembé valley and in Ivu, they are carved out of a small board, and often the flat part which serves as the handle is cut out /468/ with art. In the Caipipendí valley and among the Chané, besides combs of the preceding type there are others composed of fine splinters of wood wedged between two splinters of bamboo and held in place by a clever plaiting of cotton threads forming a design.

/468 cont./

000 forming a design. Combs of this category generally have a double
● 412 row of teeth, but sometimes one row is entirely covered by the
171 plaiting and is transformed into a handle (Nordenskiöld, 2, Fig.
[303] 109, p. 204). These two kinds of comb are also found in the Andean zone; but whereas the first is limited to this geographical area and especially to northwestern Argentina, the second, which includes all varieties of composite combs, has a vast distribution

[531]

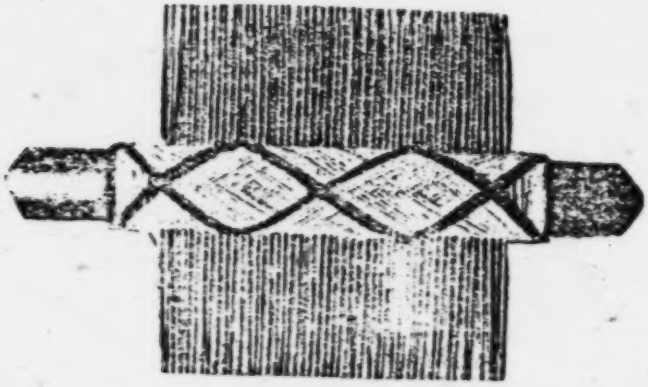

Fig. 123. Composite comb made of fine splinters of bamboo. Chiriguano. Prov.: Cararutí. (1/5 nat. size.)

over all South America, in the Inca Empire as well as in Brazil. The Chiriguano doubtless used them well before they settled in their present location. It is not the same with the comb of carved wood, which they borrowed from the Chicha or the Humahuaca. With regard to two combs in my collections, one (Plate LXXXVII, 14) has a handle carved in the shape of a dog, and the other, a deer (Plate LXXXVII, 15). They strongly resemble a comb found in the Quebrada de Humahuaca, which is also surmounted by the silhouette of a quadruped (Debenedetti, 2, p. 247, Fig. 186). At Kipon in the Calchaquí Valley Debenedetti (1, p. 27, Fig. 16) discovered a comb whose upper part represents a human head, in which our author thinks he sees an idol with a sad expression (!?). The half-breed women of that valley have kept up to our times the ancient indigenous combs of algarroba wood.

/468 cont./

412 171 At La Paya, Ambrosetti (6, Fig. 254, p. 484) discovered combs cut out of a small wooden board and some composite combs. Instead of simply recording the coexistence of two different types of combs /Plate LXXXVII appears here/ /469/ in the same place, a very natural phenomenon by reason of the heterogeneous character of the culture of La Paya, Ambrosetti puts forth the strange hypothesis that these combs served for carding wool, without taking the trouble to inquire whether this instrument was known in pre-Columbian times.

303 322 462 412 The making of combs, like all wood carving, is an essentially masculine job.

412 174 The table on Plate LXXXVII indicates my idea of the morphological evolution of the different forms of combs which I have collected.

Chapter XII

Furniture

352 [114] Since the diverse cultural elements which constitute the furniture of the Chiriguano have been completely studied by Nordenskiöld (10, pp. 8-22), I shall limit myself to mentioning them here, insisting only on several details. /Fig. 124 appears here./ /See p. 338./

[342] Let us enter a Chiriguano hut. The door we open is a kind of screen of reeds or a cowhide hardened in the sun. Daylight penetrates the interior through this opening. The only important [513] piece of furniture is a wooden cot (Fig. 125), a kind of bedstead generally occupied by two persons between whom one or two children come /470/ to slip in somehow or other. Nor do the Chiriguano hesitate to sleep on the ground on an oxhide, which they spread out in front of their house. On the upper Pilcomayo, in nearly all the huts one can /Fig. 125 appears here/ /See p. 339./ see one or two hammocks which serve either as seats during the day [286] [177] or as cradles for small children. Their technique, that of the double thread (Doppelfadentechnik), continues an old Guarani

[Text Continues on P. 338]

1: Métraux--336 E-5 (1929) 1930 SF10 Chiriguano SF10

Plate LXXXVII /left side/

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Table indicating the way in which the evolution of the different types of comb might have come about. Prov.: 1 and 2, Yumbía; 3, Isirié (upper Pilcomayo); 4 and 5, Ñawirenda; 6, Igüembé; 7, Caipipendí; 8, Igüembé; 9, Ivu; 10 and 11, Tiwiraití; 12 (after Nordenskiöld); 13, Yumbía; 14, Igüembé; 15, Ñawirenda; 16 and 17, Carurutí; 18, Ñawirenda; 19 and 20, Ibopeytí; 21, Saladito. /Combs 9-15 are shown on the next page./

1: Métraux--337 E-5 (1929) 1930 SF10 Chiriguano SF10

/Right side of Plate LXXXVII/

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/See the caption on the left side of the plate on the preceding page./

1: Métraux--343 E-5 (1929) 1930 SF10 Chiriguano SF10

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Fig. 130. Armadillo shell (tatu-pire) in which Chiriguano women keep objects for needlework, small pieces of cloth, etc. Prov.: Saladito. (About 1/3 nat. size.)

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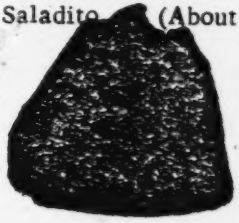

Fig. 131. Bull's testicle (toro-upía) which the Chiriguano hang up in their huts as a small container. Prov.: Saladito. (About 1/7 nat. size.)

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237
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Fig. 132. Broom made of karandaí leaves (tupisa). Prov.: Yumbía (upper Pilcomayo). (About 1/4 nat. size.)

/482 cont./

302 faces and legs oiled in this way, which gives them a very strange reddish and shiny hue. This custom, which was already [171] noted /483/ in the sixteenth century among the Tupinamba of [178] the Brazilian coast, is tending to fall into disuse.

Roucou in paste form is kept in a small corn-husk bag (Fig. 302 386 139), /Fig. 139 appears here/ as is kalasapa, a substance com- [415] posed of a mixture of roucou and pounded aroma seeds, which gives a violet color.

757 4. Jaguar fat (yaguapira) cures any "leprosy" (karatši) if 237 one rubs oneself with it after heating it.

5. Iguana fat makes cramps go away and heals wounds. [752] Its use is external.

6. The dried penis of a fox makes toothaches and earaches go away. For that it suffices to touch the ailing part with the end /Fig. 140 appears here/ of this member. The Indians consider it very malodorous and touch it only with repugnance. [415] To avoid this inconvenience they provide it with a handle and shut it up in a bamboo case (Fig. 141).

7. Deerhorns heated and /Fig. 141 appears here/ applied against the neck will cure a stiff neck. The medical use of [172] deer (wasu) horns explains the frequent presence of the horns of this animal in the archeological strata of the neighboring Andean regions. Some have thus been found in the ruins of the Alfarcito, in the Quebrada de Humahuaca (Debenedetti, 4, p. 21), at Tilcara (Debenedetti, 2, p. 232), at La Paya (Ambrosetti, 6, Fig. 235, p. 453), and at Tastil (Boman, 2, Vol. I, Plate XXIX, Fig. 78 f).

858 Horns adhering to a fragment of the skull and whose use 304 could only have been magical or medical must be distinguished 237 from the ones which the Indians work into awls. These in- ●412 struments still have a ritual use and are reserved for piercing the lower lip of children when they are old enough to wear the labret. At least this is what Campana (p. 80) informs us. Besides, the Indians all have confirmed this detail to me. [171] Formerly, the Tupinamba of Brazil practiced this operation with an awl of the same nature (see Métraux, 3, p. 105).

/484/

442 However, these awls are too abundant in each village for their use to be only sacred. It is probable that the Chiriguano use them as a simple tool for solely secular purposes.

[174] At Tilcara, Debenedetti (2, Fig. 176, p. 232) discovered specimens made of deerhorn identical with our Chiriguano examples.

824 757 8. I have in my collections seeds whose virtues are multiple: they are an excellent remedy for skin eruptions, ulcers, and toothaches.

9. For stomach-ache the Chiriguano recommend the absorption of particles of wood (mboipinda).

232 [824] 10. Certain seeds (of a graminaceous plant?) when crushed give a paste or powder with which they treat animals whose sores are attacked by worms.

11. When cows' hooves tend to work loose, they bathe them with fragments of limestone (itakwi).

757 237 12. Fat extracted from a cow's foot is an effective ointment for cases of rheumatism.

13. The beak of the toucan is said to enjoy great medicinal properties. They grate it and drink in water the powder which comes from it (Campana, 111).

Stitches in the side and dysentery are treated with a piece of armadillo shell burned, ground, and dissolved in water, which the patient drinks.

757 [114] In the Diccionario Chiriguano-Español y Español-Chiriguano etc. (passim) and Nino's book (pp. 288-290) is found many a very interesting piece of information on the pharmacopoeia of the Chiriguano. I shall summarize them in order to complete my own observations.

757 164 1. The oil which floats on kāwi, when it is done, is a good remedy for headaches.

2. Salt, ground and drunk mixed with the urine of a small child, quiets stomach pains.

[824] 3. Rheumatism is doctored by applying on the ailing part a branch of ulala (ñankawina) from which the thorns have been removed and which has been heated.

2:Métraux E-5 (1929) 1948 SF10 Chiriguano SF10

252 415 412 264 [3] [7] [263] *Chiriguano* mortars are of the cylindrical type; the pestle is long and heavy. Maize flour is sifted in round basket sieves very similar to those used in the rest of tropical South America. Meat is boiled or broiled on a spit; the babracot is conspicuously absent. Food is served in clay bowls and more rarely in wooden dishes, and eaten with wooden spoons. Salt is extracted from mines near San Luis, or obtained by evaporating the water of salty brooks.

VILLAGES AND HOUSES

342 178 592 **Dwellings.**—Until the 17th century, the *Chiriguano* built large communal houses, "150 feet [46 m.] long," in which many families lived together, each occupying the space between two wall posts (Lizárraga, 1909, p. 552). A hundred years later they were lodged, as they are now, in small rectangular houses, with a steep gable roof and wattle-and-daub walls. Sometimes the roof projects in front to form a small veranda. A house belongs either to a single biological family or to two or three closely related families, generally parents with their married children.

361 178 [343] [712] The ancient villages were composed of three to five long houses, grouped around the plaza. Modern villages also have a central plaza. A storehouse is built on piles near each dwelling and serves to protect crops against rats and dampness. Like the settlements of their Paraguayan ancestors, some ancient *Chiriguano* villages were protected by a single or double palisade.

352 **Household furniture.**—The *Chiriguano* sleep on platform beds of reeds and use their woolen or cotton hammocks to recline on during the day or as cradles for babies. The typical *Chiriguano* hammock is made of long warp threads twined together at set intervals by weft strands; a few caraguatá specimens are made in a net technique. Other items of furniture are benches carved of a single piece of wood, large vessels to store clothes and food, and crude shelves hanging from the roof. A tree trunk with three radiating branches serves as supports for vessels or for piles of corn.

DRESS AND ADORNMENT

291 177 **Clothing.**—*Chiriguano* men, wearing only a G string (chiripá), were a common sight before shirts and pants came into general use. The cotton tunic (cushma), which was adopted from the *Quechua* after the *Chiriguano* migrations, disappeared long ago, but the poncho, a more recent acquisition, is still popular. As early as the 18th century, *Chiriguano* horsemen, in true Spanish style, wore skin breeches and leather coats. They wear sandals when they have to walk over stony ground or through thorny bush.

2:Métraux E-5 (1929) 1948 SF10 Chiriguano SF10

Chiriguano women still dress in tipoys, a long, sacklike garment, fastened on both shoulders with thorns or sometimes with luxurious silver pins (pl. 42, *right*). Some tipoys (tiru) are so long that they need to be folded. 291

Anciently, *Chiriguano* men shaved their foreheads, as did the *Guaraní* of Paraguay. At a later period, men and women wore their hair long and carefully groomed it with combs. These were artistically carved from a single piece of wood; some of them were cut into the shape of animals. Men wrapped their hair around the head and kept it in place with a headband. 302 412

Women part their hair in the middle and tie it over the neck with a tasseled fillet, or with a ribbon across the forehead.

Body painting.—Both sexes formerly painted their faces and their bodies with urucú. In more recent times, women were content to smear their cheeks with urucú before taking part in a feast. Men stained their teeth black with a special grass. 302 178

Ornaments.—The distinctive ornament of the *Chiriguano*, even in modern times, is a tin labret studded with turquoise fragments (pl. 43; fig. 59, *e*). Originally, labrets were made of rosin, as were those of the *Guaraní* of Paraguay. Wooden labrets or a piece of reed inserted in the lower lip remains common among children and also among men too poor to acquire a metal labret. Some of the round tin labrets are more than an inch in diameter without including the flanges which hold them on the inside of the lower lip. 301 178

Feather ornaments almost disappeared after the migration and were replaced by typical Andean woven frontlets studded with metal plates. Men hung elongated silver plates from their necks; these ornaments probably originated from small metal tweezers worn in the same fashion (fig. 59, *a*). The most valued necklaces are composed of turquoise or chrysocolla beads which are traded from the Mestizos of Tarija or taken from the sepulchers of the people who preceded the *Chiriguano* in their habitat. Ordinary necklaces were once strung with shells or seeds, but now consist of glass beads. 301 177 [439]

Miscellaneous.—The *Chiriguano* have the deserved reputation of being among the cleanest Indians of South America. Men and women bathe several times a day, washing themselves with crushed fruits containing saponin. Soap is in great demand throughout *Chiriguano* territory. 515 824

Men depilated their faces and bodies with metal tweezers. 302

TRANSPORTATION

Boats.—The rivers in *Chiriguano* territory are not suitable for navigation; the only watercraft are crude rafts used to cross the Pilcomayo River. 501

2:Métraux E-5 (1929) 1948 SF10 Chiriguano SF10
Chané SF8

MANUFACTURES

Pottery.—*Chiriguano* pottery is, for the beauty of its painted decoration and the variety of its forms, outstanding in modern South America. The mixed origin of *Chiriguano* culture is reflected in the two types of earthenware vessels. The plain pots for cooking and the large jars for chicha, which did not differ from similar vessels of the Paraguayan *Guaraní*, were ornamented with fingernail impressions (pl. 41, *bottom, right*).

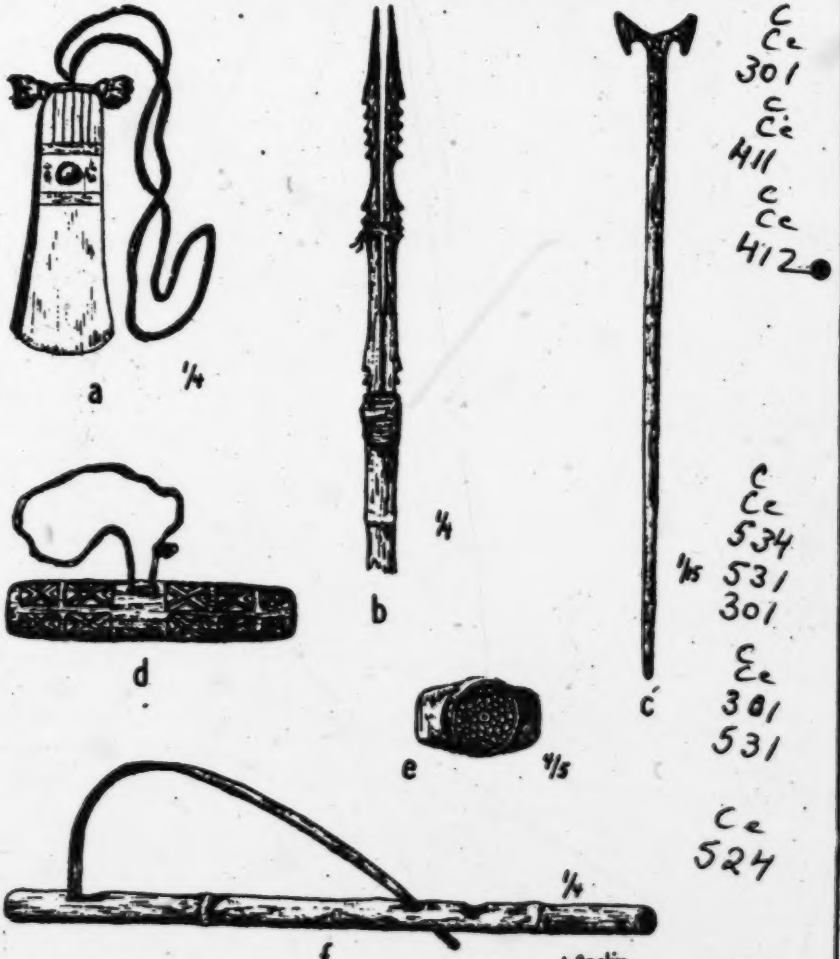

FIGURE 59.—*Chiriguano* and *Chané* manufactures. *a*, Silver pincers used as breast ornaments; *b*, bird arrow point; *c*, handle to wooden spade; *d*, wooden whistle used as ornament; *e*, tin labret with mosaic inlay; *f*, *Chané* pea-shooter. (*a*, *d*, *e*, Redrawn from Rosen, 1924; *b*, *c*, *f*, from Nordenskiöld, 1920, figs. 29, 15, 5, 34.)

653333—47—33

222 /29 cont./ IT is hot, and some cure sickness,
[959] or inflammation of the eyes, with it. Nevertheless, one should not confuse this little plant with another similar one whose fruits lack flavor and which is called by the Chiriguano "Aguara quii," which is to say, literally, chili pepper, of the fox. The best way not to confuse it is to taste the fruit; it is found everywhere.

243 TRIGO /wheat/. -- The Eternal Creator of all things in his bounty and mercy arranged that this small plant, necessary in every aspect, should yield its fruit in every region inhabited by man; thus, in spite of the excessive heat, it is harvested here in abundance, and the farmer is not robbed of his hopes if he takes care to irrigate the field opportunely. Barley also flourishes in irrigated lands, but the cultivation of both has been abandoned for reasons already expounded in these pages and also because birds greatly bother both crops, as also happens in the rice paddies, which will be found empty if they are left to the discretion of our flying friends.

[824] There also thrives together with maize, or in other places,
● [412] the wheat called Guinea, or sweet sorghum, which the Chiriguano call "Tricu" and which is indigenous; it is sweet, matures with maize, and they suck it, as well as the panicled sorghum, which is a kind of sorghum /30/ without sweetness and used for making brooms for sweeping. The seed of both plants is liked by birds.

137 VID /grapevine/. -- Farther on I have said that this plant
824 pre-eminently required for the Sacrifice, like wheat, thrives
[262] quite vigorously in this region. I add here that in the woods there is a tree with small leaves and unimportant wood, which rises up to some eight meters above the ground and whose fruit is the size of an olive, has a dark coffee color and a flavor like that of the grape, matures in the month of February, is edible, and is called "Ivaviyu" in Chiriguano. Also in the wild state is the native grape with its twining trunk. Its fruits are like a bunch of grapes; they are white and some even black, and they are good for the manufacture of brandy.

/120 cont./

578 Out of these general wars were derived other private ones, which civilized people called affairs of honor-dueling. This does not happen in private, as occurs among civilized people, who go off to a determined place with 578 their respective seconds. All is public, in the presence 541 of many people who come to drink. It is /121/ the caciques who incite their soldiers to match their strength and to avenge with crime an affront or an unfounded jealousy. When this happens, with or without a reason, the fighters place themselves in the midst of a whole crowd of spectators in the presence of the caciques, who urge them on with a word of command, while the poor angry men hit each other cruel blows.

578 Boxing is ancient, because formerly knives were not [412] known and, if they had them, they only used them in [178] their work in the fields. Now the picture has changed; [167] the young are succeeding the old, and these young people [464] continually go to work in the Argentine Republic. There they learn how to drink pure liquor, to handle the knife with which they are armed for their work, and to defend themselves. One small word is enough; it is enough if one says yainano, let us fight, the word of challenge, and knives are unsheathed, and then blood flows. Fortunately, they usually are content with inflicting wounds which rarely bring death because they do not deliver the blow with the point of the weapon but with the edge.

167 This mania for going off to the Argentine Republic has 464 them in continual movement, and, unfortunately, many of them remain for years, to return finally bringing almost nothing with them, and if one asks them, they answer very 167 rudely, "I drank it all." Last year's law has made recruit- 464 ment impossible. Several Indians went off, but they could 648 not get through Villa-Montes and returned (1).

1. If the authorities in Villa-Montes and Yacuiba continue to capture the Indians who are trying to escape, the law will not be in vain this time.

/180 cont./

352 The peculiarity of the Chiriguano cots is that they are almost always shorter than the persons who must sleep on it; most of them measure one meter 60 centimeters. They perhaps have [513] this peculiarity because they sleep curled up like pigs in order to hold together better the little clothing or blankets that they [178] possess. Today they are beginning to make them longer and [237] to have cots like the whites use; the open part of the latter is closed with cowhides which they attach first lengthwise and then at the sides, equidistantly about every seven or eight centimeters, with many small squares being the result (1).

1. The cots which are made with split agave sticks are soft and preferred; in the Ivu Mision almost all make them of this material.

574 The Chiriguano man does not like to sit on the ground either;
576 when he is visiting, it would be an insult to make a man sit on
516 the ground; nevertheless for a gathering of friends they do sit
352 down where they wish and stretch out like dogs in the sun. For
322 the reception of visitors they have crude seats. They are of
[574] wood and called Apica. There are some with two places and up to four with their respective dividers; there are some for
•[412] men and even for children. They are of a single piece, and they are made by dint of much patience by hollowing them out with an ax. The tree should be a thick one so that the seat may have a little height and the occupant may not cut a ridiculous figure of a punchinello or clown, causing laughter
[438] among the onlookers. They also use benches and chairs like
[439] those of the whites; they make the latter for their own use
[824] and to sell to their fellows and to the whites. The wood which they seek out for these labors is zacharrosa, because it is soft and easily worked with the tools that are available to the poor Chiriguano, who does not always have an adze and a chisel.
352 Some people also have /181/ hammocks, Quiha ó inni, but they are so old and black because of the action of the smoke that they arouse disgust (1).

524 1. For a children's game they hang in the

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replaced by the cloth one, although it costs a great deal: the customs of yesteryear are now disappearing, and those of today, or of the whites, are penetrating rapidly.

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For the Chiriguano virility consists of a vigorous head of hair; nevertheless, although he prizes hair on his head, he never allows any other hair on his body, except that of the eyelashes and eyebrows, which he forms into arches. He pulls out the rest of the hair on his face and body with his Tendivaha poha, or tweezers. These consist of some little pieces of tin or a piece of cane slit down the middle, and sometimes a knife. With great patience and bit by bit he pulls out or cuts off all the hair that appears on his chin, thus looking like another woman. Others who are called /illustration appears here/ /189/ rich pull out their hair with thin pieces of silver, which they call Mboivera (1).

302

1. During my stay in the territory I saw only one Indian who had a thick beard, but because of this uncleanliness he was considered disgusting. When the hairs grew, he cut them with scissors. Today the young men are beginning to wear mustaches and goatees, and many shave with razors.

[178]

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[191]

The ancient Chiriguano clothing was very simple and too immoral, as is still seen among those Indians where the civilization of the Cross has not penetrated, such as the Chacobo north of Santa Cruz and others in the Bolivian Chaco. Boys go about naked until the age of ten or twelve, and girls up to seven, at which age they are content to cover the most delicate part of the body because of a trace of modesty which exists among them. Even grown men make use of this most simple garment when they are in the country busy at work or when they are returning to town loaded with firewood or food.

[Text Continues on P. 260]

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Chiriguano adornments, etc.

[See pp. 273-274 for explanation of numbers]

/198 cont./

I am going to end this chapter by mentioning a fancy ornament which has completely disappeared. It is a woman's ornament and is called Aguá, crown, and whoever wore it was called Cuña aguá vaé, crowned woman. The duty of this woman at the public drinking bouts and solemnities was to direct the women's dance, to direct the singing, and to give drinks to the singers and dancers with her own hands. The aguá was a varicolored band up to three meters long, which was put around the head, crossed at the back of the neck, and held on by thorns, needles, or big silver pins, and both ends terminated in tassels of various colors. It was a very striking ornament (1).

1. In order to send a complete aguá to the Turin exposition I had to have it made in the girls' school in Santa Rosa. I could not get one in the town; there were none even at that time.

Here is poor humanity without any exact idea of religion and worship, they are zealous and hard-working for the body, but have no concern at all for the soul. Only Christ can restore humankind, and tear away the veil which was obscuring its intelligence, and only the priest and Catholic missionary can teach him the sound doctrine of /199/ immortality and other dogmas, so that with this knowledge he may first seek the kingdom of God and receive the rest besides (1).

1. Quaerite primum regnum Dei et haec omnia adiicientur vobis.

Explanation of the Preceding Illustration

1. Sticks for getting fire.
2. Bull's horn for use as a musical instrument.
3. Tail of a quiriquincho /armadillo/ for use as a musical instrument.
4. Tweezers for pulling out the hair from the face and other parts.

λ[ie., on p. 266.- Ambat]

4: Niso--274 M-3 (1890-1911) 1912 SP10 Chiriguano SP10

/199 cont./

301 5. "Mbotivera," or pieces of silver for adornment.
6, 7, 8. Metal tembetas.
9. A hollow-cane tembeta.
10. "Tapicuana," or band for the hair.
11. "Aguá," or long band for adornment of the queen in drinking festivals.
• 412 12. Wooden comb.
534 13. Purunga for playing as a musical instrument.
14, 15. "Senene," or Chiriguano flutes.
16. "Igüiramimbi" for playing as a musical instrument.
17. Stone ax.

/200/

Chapter Eight

The Chiriguano Family

Introduction

903 The theory of the founder of the transformist school, in which he attempts to demonstrate and establish the origin of the human race by means of evolution, is completely absurd. /The remainder of the introduction, pp. 200-202, is omitted in the translation. Page 202 continues as follows./

The Family

Genesis tells us of the origin of the human race, and outside of this book all is confusion: faith teaches us that God created the first man in His image and likeness, and later gave him a companion, taking her from his rib, from which it is deduced that the family began in the world, or in historical times, from the beginning of humanity (2).

722 2. Readers already know the story which
723 Anduari told me regarding the creation of
871

4: Nimr--221 M-8 (1890-1911) 1912 SP10 Chirigwano SP10

142
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Group of Indian Workers

/239 cont./

Old Method of Farming

241 In planting the fields which are already old, they use the same method of applying fire to the weeds and stubble that are left after the harvest; this method is even coming to be practiced by the whites and the mestizos. As far as fertilizing the land, the Chiriguano does not worry about it, because the lands are virgin and the Indian hardly plants maize on a large scale, and, if it rains regularly until the grain has become hard, the crop is abundant and the farmer has enough to eat and an abundance of chicha to drink, which is what he wants.

412 Formerly the ava had nothing but a wooden shovel and a stone ax, which is hard to find today. He obtained his livelihood with these insignificant tools: the ax served him for cutting trees and bushes and the spade for pulling up all the grass and brush. The spade was like those used by bakers for putting bread in the oven; it was of soto wood and was attached to a rather long handle with bejuco vines or strips of toborochi bark; the handle was always long, because the Indian /240/ neither knew nor does he now know how to bend his back at his farm chores; these spades were also made from the shoulder blade of cattle, horses, or asses (1).

[824] [239]

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1. Baron don Erland Nordenskiold, in addition to the pots from various regions of Bolivia, sent to the Swedish museum pots made by the Chiriguano, wooden spades, and stone axes.

241 [242] Planting was usually done in the month of November; after the ground had received at least two rains. Then the Indian would first destroy with his spade the small amount of grass that had come up, and then he would notify his friends and relatives so that they might help him to plant on the day indicated. The cacique took part in the general planting, ordering that those under him should help one another; thus, early on the said day, at daybreak, they would

[47K] [534]

/248/

273 She prepares and grinds an amount of maize corresponding to the number of vessels she wishes to fill and then sifts it in a special sieve which has large holes, Unupesa; from this first job there is always left a kind of sifting, or arrocillo, that they call Abaticure, which, after being soaked and sifted, is again ground, after which they roast it a little on potsherds, chew it, and keep it in a vessel for a period of four to six hours. This is called Timisúú, chewed thing.

Meanwhile water has been collected, and the pot has been put on the fire and is near the boiling point; before it boils, the lighted firewood is taken away to stop its action; she throws into the pot the dry meal which she ground first and mixes it with the hot water, keeping it from becoming lumpy. Then she removes a small quantity of this mixture and puts it in a small vessel, into which she puts all the Timisúú, which mixture they call Umopirai. Having done all this, she stirs continually with a maté, bringing the liquid up to a certain height and letting it fall back into the vessel so that it will acquire the necessary sweetness. When the mixture has become quite sweet, she pours it all into the ollas which are on the fire, brings them to a boil, stirring it all continually for a period of 24 hours (1).

1. If the liquid were not made to fall from a certain height into the vessel, it would not be sweet at all. The spatula with which she stirs the liquid day and night is called Mbaepivaraca.

• [412]

At the end of 24 hours, it is fully cooked; she removes the fire and takes out the thick liquid, putting it in other pots with a wide mouth. The women, both big and small, then sit down and begin to chew until the end (this operation may last some two hours). Then different ones pour water into it, strain all the ingredient in a very fine sieve, Cangüi mbogua, and, once finished, bottle the clarified liquid in other pots with narrow mouths. The lid for these vessels is a small jar or a gourd, and, to seal it hermetically, they plaster it with a

4: Nino--368 M-3 (1893-1911) 1912 SF10 Chiriguano SF10

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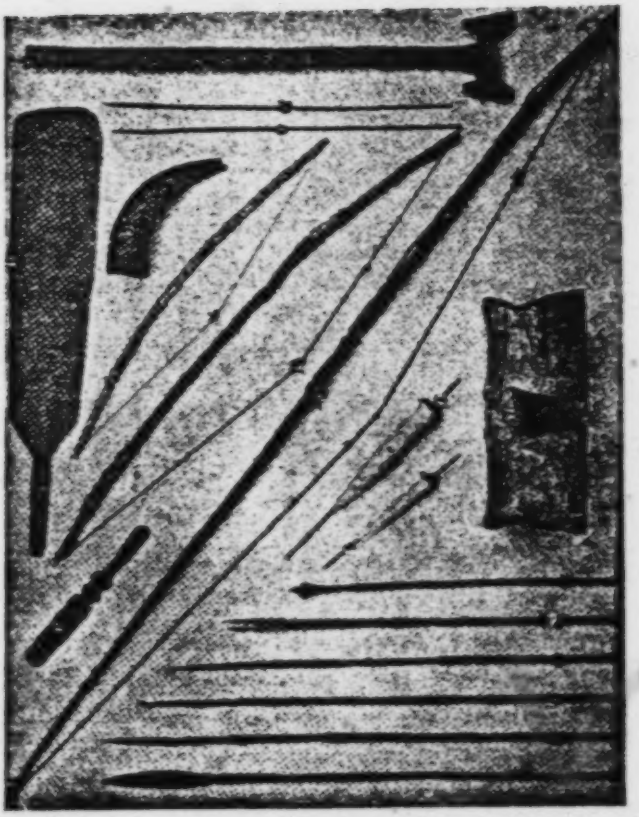

Bows, arrows, etc. /see p.382 for additional explanation/.

4: Nino--382 M-3 (1893-1911) 1912 SF10 Chiriguano SF10

Explanation of the Preceding Illustration /see p. 368/

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1. Wooden spade for work.
2. Spade handle.
3. Bull's horn for blowing.
4. Implement for stirring food.
5, 6. Chiriguano spindles.
7. Chair or seat with two spaces for children.
8. A bow for adults.
9. Arrow with iron point.
10, 11, 12. Arrows with wooden point.
13. Bow for young people.
14. Arrow with two points for hunting and fishing.
15. "Songo," or arrow with rounded point for hunting small birds.
16. Bow for boys.
17, 18. Arrows for boys.

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Chapter Thirteen

Illnesses, Remedies, Death, and Mourning

Introduction

One moment of reflection suffices for a man to understand that there is no true happiness on earth; he who can glory in being happy in this world finds many sorrows: unsatisfied desires, unexecuted orders, unfinished projects. The careless execution of injunctions constitutes thorns for the heart of the man who could call himself blessed. He would like everything to go along as he desires, and when this does not happen he suffers, and if he does not express his suffering he suffers much more (1).

> 1. It is a great relief for a man to be able to communicate his sufferings to a sincere friend, but it is difficult to find such, because he who has a friend has a treasure, and the treasure is a rare thing.

5:Nordenskiöld E-5)/(1908-1909, 1913) 1920
SF10 Chiriguano SF10
Chané SF8

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I have not seen wooden boxes anywhere else, and scarcely think they are genuinely Indian. I shall return to the subject of baskets.

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Except among the Chiriguano and the Chané, I have only seen the scales of the armadillo used as boxes among the Mataco, and there only as a curiosity. They are, however, known from the Guyaqui[1]), from the Indians of Roraima[2]) and from Indians in N. W. Brazil[3]). The sewn baskets of armadillo scales which are sold in the curiosity-shops of Buenos Aires probably hail from Paraguay, and it is not impossible that here, too, we have to do with an original Indian idea.

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The fat of various animals which is used for healing is usually kept by the Chiriguano and Chané in shells, especially those of the *Borus oblongus*.

I shall return to the subject of calabashes.

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Fig. 3. Seat of wood from the Chiriguano. G. M. 13. 1. 178. 1/6

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Fig. 4. Wooden hook. Chiriguano. R. M. H. 600. 1/6

[1]) Kunike fig. 15.
[2]) G. M.
[3]) Koch-Grünberg (1).

S:Nordenskiöld E-5 (1908-1909. 1913) 1920
SF10 Chiriguano SF10
Chané SF8
South American Indians

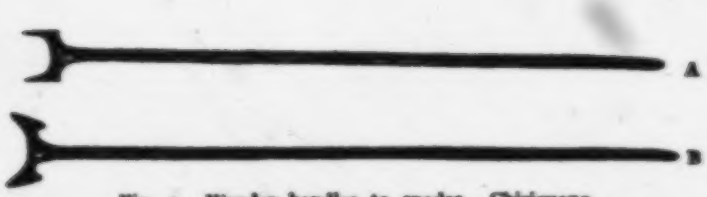

Fig. 5. Wooden handles to spades. Chiriguano.
1/11 A — Private collection. B — R. M. E. 680.

III.

Tillage and tillage implements.

Vegetable food is of great importance to the majority of Indians. This is most specially so with the Chiriguano and Chané. To the former, as well as to those of the latter tribe who dwell on the Rio Itiyuro, maize is of extraordinary importance. The Chiriguano and Chané belong to WISSLER's »maize-area» or »area of intensive agriculture». WISSLER divides S. America into three great food areas: area of intensive agriculture, manioc area, and guanaco area. Another division would be more correct, viz. —

1) Area of intensive agriculture.
2) Area of manioc and fishing.
3) Area of wild seeds and fishing. El Gran Chaco.
4) Guanaco area.

There will, of course, be in addition a number of small areas with special conditions of life, as in the extreme south of S. America.

The Chiriguano grow 11 kinds of maize[1]), 11 varieties of beans[1]), 12 kinds of calabashes[1]), of which 5 are edible, sweet potates, mandioca, sugar-cane, mani, urucu, tobacco,

[1]) According to Nimuendajú Pp. 241 . . . .

5:Nordenskiöld E-5½(1908-1909, 1913) 1920
SF10 Chiriguano SF10
Chane SF8

water-melons, melons, figs, tuna[1]), oranges, cotton, millet, and reeds for arrow-shafts.

Bananas are not cultivated. Among the Chané at the Rio Parapiti the sweet-potato is the most important cultivated plant. Of the plants mentioned, the sugar-cane, the melon, the watermelon, the fig, the orange and the millet are not American. All those cultivated plants which have been introduced by Europeans are of slight importance to the Indians. I have never seen mandioca cultivated, but I have heard that it is to be met with in the fields of these Indians. As a staple food of the people it is of no importance here.

Iron spades bought from the Whites are the tools employed nowadays. Very occasionally one still sees wooden spades. In Part I I have published a map of the geographical distribution of the spade.

The spade in S. America is evidently a western element of culture, i. e. the idea of fitting on a more or less broad blade to the lower part of the digging-stick is plainly derived from the western area of civilization.

Whence the Chiriguano got the idea of the shapely handles I do not know. They are too shapely for the art to have been derived from the Whites. They have obviously a long evolution behind them, and it is very probable that they had their origin in the Mountain area of civilization.

Hoes with iron blades occur. The Indians have got them from the Whites. I have not seen any primitive hoes, although we are here on the border of the area of distribution of the genuine American hoe[2]).

The Chiriguano and Chané use a small implement for removing the corn from the corn-cobs which I have described in Part I. P. 32.

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[1]) Opuntia.

[2]) It is incorrect to affirm, as Wissler does, (P. 27) that the hoe was unknown in S. America. Incas had hoes and they are found still among the Quichua.

5:Nordenskiöld E-5)/(1908-1909, 1913) 1920
SF10 Chiriguano SF10
Chane

VII.

Tools.

C 442 [1114] With the exception of bone awls the Chiriguano Indians of to-day have no genuinely Indian tools. Bone awls which I have already dealt with in part I very rarely occur among the Chiriguano. I omitted to mention this in the German edition of Part I.

VIII.

Fire-making.

C 372 Once only have I seen a Chiriguano Indian making fire by wood friction. He had forgotten his matches. Flint-and-steel are also seldom seen among these Indians now-a-days. In my collection there is a cotton-plaiting, in a wooden pocket from the Chiriguano. The Indians use such for tinder when striking fire with flint and steel. The idea of this was of course obtained from the Whites. C [1117]

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SF10 Chiriguano SF10
Chané SF8
Aymara SF5

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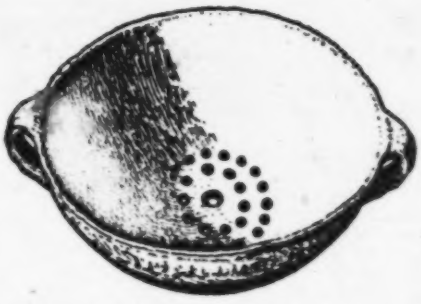

Fig. 16 a. Upper part of the steaming apparatus. The specimen given here is from the Mataco-Vejos, who learnt to use it from the Chané. R. M. M. 1022.

IX.

Utensils used in preparing and consuming food.

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The Chiriguano and the Chané have large wooden mortars with long wooden pestles. Hand-mills of stone or any other material are never used. The geographical distribution of the mortar has already been dealt with in the first volume (map 10). Evidently the wooden mortar has come to the Chiriguano and Chané from the east. It is a northern and eastern element of S. American culture. Among the Chiriguano one sometimes sees mortars hollowed out in stumps of trees. It is obvious that the Whites did not introduce the mortar here from the fact that it was mentioned by such early author as SCHMIDEL from the Syeberis in North Chaco.

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Both the Chiriguano and the Chané sift and strain through a round basket, the »urupé» (fig. 52). The following table shows us how sifting and straining is done by the tribes I have visited. Some tribes use four-sided sieves and strainers.

5:Nordenskiöld E-5,4(1908-1909, 1913) 1920
SF10 Chiriguano SF10
Chané SF8

Ee 252 445 *171 [4/2]

that they fanned the flour. They had no proper sieves. As we have seen from the table, the Chaco tribes have no basket-sieves, but use bag-nets instead.

Mandioca-graters do not occur among the Chiriguano and the Chané.

Ee 252 445 273

Of course the Chiriguano and the Chané cook their food in earthern ware. Maize-beer »Chicha», their chief food, is boiled in large vessels. It is only with great difficulty that these can be moved from one place to another[1]). Some of the Chiriguano occasionally allow the maize-beer to ferment in hollow stumps of the bottle-tree.

Ee 252 445

The steam cooking-pot shown here (fig. 16) is of very great interest. It is used by the Chané and Chiriguano in cooking a certain dish of maize, the »huintimimmo».[2])

I have seen this contrivance being used as shown by the illustration, but I have, unfortunately, not tasted the maize-dish that was cooked in it.

Ee 252 445 *171

In literature dealing with other parts of S. America I have only found this steam cooking pot mentioned by ULLRICH[3]) from the Rio Grande do Sul (Munizip Pelotas).

He there found pieces of »Siebtöpfen» and says that they were used on the top of a cooking-pot. ULLRICH[3]) tells us that these steam-cooking-pots were used by the

Ee [172] [437]

[1]) When fragments of very large and heavy earthenware vessels are found in archæological excavations one may, as a rule, presume that they originate from a permanently settled tribe. It may be assumed with perfect certainty that these very large vessels were made at the spot where they are found. Small earthen pots may, however, have been bartered from some other tribe. This is naturally of a certain interest if we wish to distinguish between native and imported pottery found in archæological excavations. — Some of the Chiriguano at the Rio Parapiti make only the big common clay vessels themselves and get the small, painted pots by barter from other Chiriguano Indians.

[2]) *CORREA when speaking of different dishes of maize says that of huintimimmo:* »especie de torta muy tierna hecha con harina de maiz humedecida y blandamente dispuesta en una tortera agujereada y cocida con baho del agua caliente.» P. 42.

[3]) P. 500.

8:Nordenskiöld E-8,4(1908-1909, 1913) 1920
SF10 Chiriguano SF10
Chane SF8

small Indian tribes in the woods north of the Rio Camaquam at the end of the decade 1870—80. The perforated top bowl contained maize, the pot under it boiling water.

I cannot at present tell whence the Chiriguano and the Chané got this cultural element. Besides among these Indians, I have also seen steam-cooking-pots of the same kind among the Mataco-Vejos, who live close to the Chané at the Rio Itiyuro.

The Chiriguano and the Chané have special bowls for roasting maize (fig. 16). I have only seen bowls of the same shape among the Mataco-Vejos. The roasting of maize is commonly practised among the majority of Indians who grow this plant, which is of such great importance to many tribes.

The Chiriguano and the Chané do not know of the babracot. They only use the wooden spit. It is often cleft, as is also the case among the Choroti and the Ashluslay. As the kinsmen of the Chané in Northern Bolivia and the kinsmen of the Chiriguano on the coast of Brazil use the babracot, the question arises: »Why is it not used here?» I suppose this is because the hunting is of no great importance, the fishing not very good, and the fish caught small or, at least, rarely of any size.

Pit-ovens are unknown here. When chicha is being made, great pot-spades are used. They are either wooden (fig. 17 A) or made of the hafted shoulderblade of some large mammal. I suppose all Indians who cook their food use *something to stir it with*. Usually, however, only a plain stick is used. Pot spades of the kind shown here are in use among the Mataco-Vejos, who live near the Chané on the Rio Itiyuro and the Guató[1]) on the upper Rio Paraguay. It is not unlikely at all that the latter have had them from the Chané, for we know from accounts of very early discoverers, that some of the Chané settled on the upper

[1]) Max Schmidt (5), P. 103.

5tNordenskiöld E-5;1(1908-1909, 1913) 1920
SF10 Chiriguano SF10
Chané SF8

Rio Paraguay after Garcias marauding expedition, not far from the tract where the Guató now live.

A potspade of the same type from the Yulãmaua along the Rio Querary is shown in an illustration by KOCH-GRÜNBERG.[1]) I have not seen the shoulderblade potspade in any other tribe.

Similar spades, said to have been used for agricultural purposes, are mentioned by ST. CRICQ[2]) from the Conibo.

Nowadays the Chiriguano and Chané for the most part eat their food with metal spoons which they have got from the Whites. They have, however, wooden spoons as well. They generally eat from earthenware bowls of their own make. They seldom have wooden bowls. I have already treated of the distribution of the wooden bowl and the wooden spoon. (Part 1 map 12 and 13.) They are features of western civilization. Calabash bowls are universally used by the Chiriguano and Chané as drinking vessels, particularly for chicha.

Silver bowls — »Cagua» — are occasionally seen at the Chiriguano festivals. These bowls, which are shaped like cloven calabashes, are often furnished with small ears and are made by mestizo smiths to suit the Indian taste.

There is in my collection a calabash bowl that has been turned into a ladle by means of a handle. It is from the Chané at the Rio Itiyuro. I have also procured some bowls made of the fruit of the calabash tree from the Chiriguano. The Indians get them from Sta Cruz de la Sierra, for, as far as I know, the calabash-tree is not cultivated within their own area.

Fire-fans of plaited palm leaves are used, though they are rather uncommon. These fire-fans belong to the cultural elements which have come to the Chiriguano and the Chané from the north and east. Later on, when writing about the Indians in northeastern Bolivia, who have sev-

[1]) T. 2. P. 209.
[2]) P. 287

5:Nordenskiöld E-5,4 (1908-1909, 1913) 1920
SF10 Chiriguano SF10
Chane SF8

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eral different kinds of palm leaf fans, I will deal with them in detail.

At present I can refer to what Pater Schmidt[1]) has written about the geographical distribution of fire fans of pla'ted palm leafs in S. America.

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Fig. 17. Pölspades. Chiriguano.

A from Tihüipa. 1/6. R.M. E. 505.
B from Caipipendi. 1/6. R. M E. 596.

[1]) P. 1082.

8:Nordenskiöld E-8,N (1908-1909, 1913) 1920
SF10 Chiriguano SF10
Chane SF8

seen in the villages about the upper Rio Pilcomayo. When the hair is long it is not worn hanging down the back, as is the custom with other Indians wearing long hair. It is wound round the head, »put up», and kept in place with a frontlet. I have not seen any other Indians do their hair in this way. The women also have long hair, usually parted down the middle and braided. Braiding may have been introduced in post-Columbian times, though this is uncertain, as it was also common in the culture-area of the west.

The Chiriguano and Chané use combs, but no brushes. In Part I I have already dealt with different kinds of combs met with in the districts through which I have travelled. The Chiriguano only have plain wooden combs which are sometimes rather prettily carved. This type of comb is probably derived from the mountain civilization, as I have already pointed out in Part I.

The Chané have »stick-combs», »Stäbchenkämme» and now and again, though rarely, plain wooden ones too. These constructed combs are, as a rule, one-sided, in contradistinction to the doublesided ones of the Choroti and the Ashluslay. Thus we see that the Chané type of comb is unlike the one found in old tombs in the Puna de Jujuy, and which now occurs among the Quichua and the Aymara, the Choroti and the Ashluslay. Chiriguano and Chané combs are used exclusively for cleaning the hair and are never worn as ornaments.

The use of the pincer or tweezer as a toilet article certainly came to the Chiriguano and Chané from the civilised zone in the west. They are of metal and are used for removing hair from the body. Nowadays pincers are usually made of the metal from some old tin can, but sometimes of silver. These pincers of silver also serve as breast ornaments for the men, and are called »boivéra». They have to a great extent lost their original use, and are now simply used as ornaments. They have even sometimes been hammered together so that they can no longer be used as pin-

cers.

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Fig. 26. 1/2.

1) Implement of tin for removing hair. Chiriguano. R. M. E. 356.
2) " " silver " " " also used as breast ornament.
Chiriguano. R. M. E. 378.
3) Breast ornament of silver. " " 370
4) " " " " " " 370.

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cers. They have become bigger and bigger. (fig. 26) These silver trinkets are not made any more by the Indians themselves, and it is likely that the majority of, or all the silver ornaments now found among the Indians have been made by white silversmiths.[1]) The shape is always Indian, but

[1]) Nino is also of the opinion that the ornaments is not of Indian make. P. 198.

Nordenskiöld E-8 #4 (1908-1909, 1912) 1920
SP10 Chiriguano SP10
Chaco SP8

the ornamental design not always so (fig. 26). It is difficult to decide whether the idea of the pincer as a mere breast ornament is due only to the influence of non-Indian smiths or not. Most likely the pincer was turned into mere ornament by the makers, who presumably used it as an article of barter and then increased its size in order to make it more and more coveted by the Indians. At last the makers themselves may even have been quite ignorant of its original use. Consequently we cannot be wrong in considering the »boivéra» an original Indian element of culture which has been transformed under the influence of

Fig. 27. Figure tattooed on the arm of a old Chiriguano Indian. ? Caipipendi. 1/1.

the Whites. There is no doubt that the pincer is a cultural element derived from the old culture zone in the west. They are, as we know, quite common in collections from that part. The Chiriguano also sometimes use a piece of split reed for removing hair.

Tattooing occurs here, but is very rarely seen. I have only seen two Chiriguano women and one old Chiriguano man with tattooing on their arms. The old man had the figure depicted here (fig. 27) tattooed on his arm. If I understood him rightly, it used in old times to be quite common for the Chiriguano-men to be tattooed in the same way. I have seen no tattooed Chané men or Chané women. I have already given an account of the distribution of tattooing in S. America in the first part of this book.

Schmeltz 1-4 (1888-1900, 1913) 1920
SF10 Chiriguano SF10
Chané SF8
South American Indians S3

X 3. Pinera Rio Ventuari. Communication by letter from Prof. Koch-Grünberg.

Baskets with lids which are opened like an ordinary cigar-box.

A. Graven on the Peruvian Const. G. M. Very common in all collections of peruvian antiquities.

Some baskets from the Chiriguano have shapes which make them look like imitations of earthen vessels. (Fig. 33 C and D) Sometimes they even have an ear. Chiriguano and Chané baskets are very seldom ornamented.

Metal-work.

The only metal-work now occurring here is that the Chiriguano sometimes make their tembetas (lip-buttons) of tin themselves. Whether the Chiriguano and Chané, before coming into contact with the Whites, themselves performed metal-work, I cannot say.

Stone-work.

The Chiriguano and Chané do not now work stone.

Wood-work.

For their wood-work the Chiriguano and Chané now use exclusively tools obtained from the Whites.

Weaving.

Among the Chiriguano I saw two types of loom; among the Chané only one.

The loom found among the Chiriguano and Chané is characterized by the completed product forming a ring (seamless) if so desired. The warp is set up as shown in the outline drawing, (Fig. 55.2) and in the sketch of a hand-loom from the Chané. (Fig. 55.1). When the ring is

[Text continues on p. 176]

6: Nordenskiöld--32 E-5 (1908-1909) 1912 SF10 Chiriguano SF10
Chane SF8
Ca 415 556 Cca 512 836 Ca 512 264 273 C 276

/179 cont./
ornaments, bowls of silver and necklaces of turquoise and chrysocolla, and many other things.

It is quiet very early in the villages. People do not talk all night, as in a Choroti or Ashluslay village. The young men and the unmarried young girls do not rove about in order to lie together. The virtuous Chané and Chiriguano girls are guarded by their mothers, do not seek adventure, and do not admit gentlemen callers. There are no nocturnal meals, as among the Choroti and Ashluslay. In these villages people sleep at night, that is, if they

Fig. 88. Tobacco pipe. Chiriguano. Caipipendi. 1/2.

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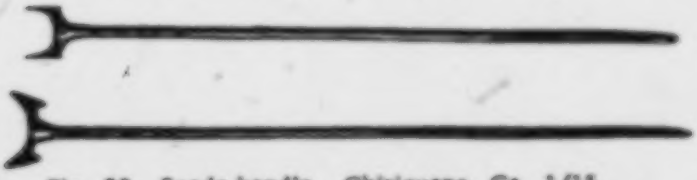

Fig. 89. Spade handle. Chiriguano. Ca. 1/15.

Ca 512 524 533 765

are not busy brewing maize for a festival.

Very early in the morning one is awakened in almost all villages by songs of lament. There is always someone who has lost a relative and mourns him loudly. If someone has died in the village, it is uncomfortable in the village for a person who likes to sleep late.

/180/ The women get up at the earliest hour in the morning, the men somewhat later, and the daily work begins. The first thing that the women do is to fetch water and take a bath, a truly refreshing bath.

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They carry the water jugs in various ways. On the Rio Itiyuro the Chané women carry them on the shoulder, on the Rio Parapiti in a carrying net (Fig. 87). The latter custom is also

When I offered a

/182 cont./ Chacobo a cigarette, he took only a few puffs, kept the smoke in his mouth for a few seconds, and then threw the cigarette away. Nevertheless, the Chacobo plant tobacco, but use it exclusively as a remedy. If a Chacobo gets a "boro," a fly larva, "Dermatomya," under his skin, he covers the fly larva's entry spot with tobacco powder and is then able to squeeze out the dead larva in a few hours. The Choroti and Ashluslay are passionate smokers. /183/ For them smoking is one of the greatest enjoyments of life. These contrasts are quite strange.

The Chiriguano and the Chané have extensive plantings which, in contrast to the clearings of the Choroti and Ashluslay in the wilderness, are well tended. In former times they used spades made of hard wood with attractive handles (Fig. 89), but these have now gone out of use and have been entirely supplanted by iron spades. Not infrequently the fields lie far from the villages, as, for example, in the Caipipendi valley. This is due to the fact that water is not available throughout the year everywhere in the vicinity of the plantings.

As has been mentioned, the produce obtained is stored in granaries built on piles (Fig. 84), so that it will be at least somewhat protected from rats, moisture, etc. These granaries are seen everywhere, except among the Chané on the Rio Pilcomayo.

The fields are fenced in with fences built brush-shaped, which are often difficult to climb over. There is no fertilization of the fields. On the other hand, a field that has been exhausted is left to lie fallow.

The time of sowing is determined by the position of the Pleiades, "ychu." When this passes across the horizon very early in the morning, it is sowing time. When the rainy season begins, everything must be sowed.

The men clear and sow. Everyone helps with the harvest, men, women, and children. Among the Chané in the Ituyuro valley the men sowed the maize, that is, they took care of the larger plantings, whereas the women were gardeners and planted gourd beans, etc.

6: Nordenskiöld--07 E-5 (1908-1909)1912 5710 Chiriguano SP 10
Chané SPJ

/304 cont./

and Mataco, who still in part dress in fur cloaks, seem to me, like the Fuegians and Patagonians, to have immigrated to the Chaco from the cold pampas in the south where washing was extremely unpleasant, whereas the Chiriguano and Chané come from the north, out of the warm, humid, virgin forest, from the great rivers, where bathing was always pleasant and refreshing. Now, where /Fig. 109 appears here/ they live under the same climatic conditions, the former have preserved their dirt, the latter their cleanliness.

Im Thurn (1) reports that the Indians in Guiana bathe

1. Im Thurn: Among the Indians of Guiana. London, 1883.

Fig. 108.
Woman's tattooed arm. Chiriguano.
Itapembia.

immediately after eating, without any harm to them. I often observed the same thing here.

The Chiriguano and various Chané shampoo the head with the seeds of "yuyuba," which they grind. For the same purpose the Chané on the Río Parapití use the bark of the mimosi /Zizyphus mimosi Griseb./, "yiag." The nails, and /305/ not least the toenails, are also very carefully tended. For combing they use combs carved in wood or made out of sticks of cane tied together.

6. Nordenskiöld--SE E-5 (1908-1909) 1912 SP10 Chiriguano SP 18
Chane SP 8

Ee 519 Ee [171] Ee 296 Ee 128

/205 cont./

The Chané and Chiriguano never relieve themselves close to the huts. I never saw special privies, however, for any Indians, and not for many whites in Bolivia either.

The Chané and Chiriguano are very careful with their clothing. They keep it clean and mend it if necessary. The members of each sex wash and mend their own things. The men here sewed quite as well as the women.

I have spoken here of the everyday life of these Indians. Now I shall describe the most important events in their lives, in their social life, their festivals, their industry, etc., and

Cca 482 531

Fig. 109. Combs for combing the hair, not for fastening in it.

A, from the Chané; B, C, D, from the Chiriguano.

Ee 128

finally proceed to their legends and their religion.

6: Nordenskiöld--88 E-5 (1908-1909) 1912 SF10 Chiriguano SF8
Chané SF8

C Ce 273 [412] [237]

/237 cont./ The pots are stirred with large wooden spatulas (Fig. 118a) or with shoulderblades provided with handles (Fig. 118b). It is the pride of every woman to brew good beer, "cangui," and much beer. Indeed, they are /238/ indefatigably busy. One sees them working all day, and even at night they are busy cooking and grinding. No family may refrain from making cangui.

The use of saliva may perhaps seem unsanitary. At first I thought this too, but soon I was so hardened that the cangui prepared with saliva-yeast in Indian fashion tasted better to me

Ce 273 415

Fig. 117. Cooking maize beer. Chané. Río Itiyuro.

Ce 273

than that brewed by the whites in a civilized way.

Connoisseurs, not only Indians, are said to be of the same opinion as I. It is important, however, that the cangui be drunk cold; it is unpalatable lukewarm. When it has stood for a long time, it is somewhat intoxicating, but not as much so as algarroba beer.

C Ce 273 574 576

There is a great deal of ceremony connected with cangui drinking. In front, on benches and stools (Fig. 85), sit the men, and behind them, on the ground, the women. The older ladies are given the best places. The hostess brings in the cangui in her

Cc /239 cont./
535 were used at their great festivals. In his opinion, the Chané used
532 masks before the whites came to the country. /240/ In addition
179 in those days they had around their legs
796 rattles made out of fruits and on their
[534] heads feather ornaments of parrot feathers.
[237]

Ee The Chiriguano and Chané
532 always destroy the masks after the
177 carnival. They are either burned
541 or thrown into the river. The Chané
535 call the masks "añañya."

C It is strange what a great
Cc role the carnival now plays as a
541 festival among the Indians. This
177 undoubtedly comes from the fact
[464] that the whites distribute great quantities of spirits there and that the Indians who work for them are given a few days off at that time.

Ee Guests often come from a great
527 distance to the festivals. They appear
273 there in their finest clothing and orna-
292 ments, freshly painted and nicely
574 combed. Most of the old costumes
301 and ornaments, however, have already disappeared. Nevertheless one still sees women in home-woven clothing

C with necklaces of chrysocolla and
Cc turquoise. I never saw used, however,
[178] the silver diadem and the silver
C pins which belong to the festive attire.
●412 One often sees the men's blue
237 costumes (Fig. 81) with silver
→ chest ornaments preserved in the huts by the old people, but they
Ce are not used for the festivals.
535 Among the Chané in the Itiyuro
527 valley I saw the Indians dance at a cangui festival. Around a "yambuy"
273 of cangui stood a few old men in twos, singing a monotonous song
533

A B

Fig. 118. Soup spatulas. Chiriguano.
A = Tihuipa. 1/8.
B = Caipipendi. 1/6.

7: Rosen E-5 (1901-1902) 1924 SF10 Chiriguano SF10

seen any Chiriguano using this typical ancient Andean garment. Ponchos of the cloak type, and robes of the kind used by the Chaco Indians, on the other hand, I have seen worn by the Chiriguano men, who put them on against cold and wet. Formerly the Chiriguano men dressed in the »chiripa», which was a rectangular skirt that was fastened in front to a cord tied round the waist, then passed between the legs, and fixed to the cord above the buttocks. One may still see, here and there, some small boy wearing nothing but this primitive garment. On their heads the men often wear a broad, red. turbanlike frontlet (fig. 194), and, when setting out on long marches, they put on their feet sandals, the straps of which bear distinct resemblance to straps on sandals that have been found in ancient graves on Puna de Jujuy.[1]

Fig. 195. Chiriguano boy with long, flowing hair. San Luis, Bolivia. Photo. E. v. R.

The women also possess sandals, but, like the men, generally walk about barefooted. The women's clothing consists of a loose-fitting, tubular garment made of woollen, or cotton, stuff. It is called »tipoy». The upper part of it is pinned together over the shoulders by means of cactus spines or metal pins, in the manner seen in fig. 190, which leaves the arms free, or the garment may be fastened under the armpits in the way the girl in fig. 194 is wearing it.

Nowadays the men mostly wear their hair bobbed, and with a frontal fringe (fig. 194), but I have seen boys, not fully grown, with long hair, hanging loose down (fig. 195). In former days all the men had long hair, which they gathered on the top of the head, where it was secured with a frontlet, a custom not yet quite discarded in some out-of-the-way parts of the country. The women let their hair grow long, give it a centre parting on the top of the head (fig. 190), plait it into tresses and tie it up, or allow it to hang loose. One may sometimes see girls with short hair (fig. 194), but in such cases the hair has been cut short as a sign that its owner has entered upon her first menstruation. On the death of a near relative it is also the custom of the women to cut off their hair.

Fig. 196. Wooden comb. Chiriguano. Bolivia. 1/1. Riksm. 05. 3. 829.

[1] Nordenskiöld (12), fig. 23; von Rosen (1), fig. 84.

[footnote 1 appears on p. 200 -- An.]

302 The hair is tended with very neat-looking wooden combs (fig. 196).
[442] Among the Chiriguano I also noticed composite combs of the type used in the Chaco (fig. 85).

[386] Among the men as well as the women, the custom obtains of painting
[824] the face red, the pigment being prepared from Bixa orellana. Many of the men I met in the neighbourhood of San Luis had red-painted the whole face below the eyes, and some of the women had circular red
302 spots, about 3 to 4 cm in diameter, painted on their cheeks. On the
304 other hand, I did not see any tattooed Chiriguano. Instances of tattooing have, however, been noted by Nordenskiöld, who also has seen Chiriguano women who had stained their teeth dark blue with some vegetable extract.[1] In the past, tattooing as well as teeth-staining were commonly practiced by the Chiriguano.

301

Fig. 197. Lip-stud (tembeta) of tin, with inlaid, pierced, turquoise-coloured glass-beads. Chiriguano, Bolivia. $^{9}/_{6}$. Riksm. 03. 3. 322.

Another Chiriguano ornament intimately connected with the human body is the lip stud (›tembeta‹), which is exclusively worn by men and by youths who have attained marriageable age. The Chiriguano lip stud of the present day consists of a hollow tin cylinder with two laminate projections (fig. 197). The cylinder is filled with some waxy substance, into which are embedded a number of small beads of stone, glass or porcelain, usually of a turquoise-blue colour. The lip stud is inserted from the inside, through a hole made in the lower lip, so that its circular, bead-beset, front surface barely shows beyond the skin of the lip. The base of the lip stud, which is slightly concave, then rests against the teeth of the lower jaw. This quaint ornament creates no displeasing impression, but should a Chiriguano take it out, he would look both pitiable and ridiculous, as the saliva then runs through the large hole in the lip. Hence it is considered disgraceful to be seen without the lip stud, and on many occasions I have noticed the women scornfully deriding such men as had sold their lip ornaments. As soon as a man had taken out his lip stud, he generally put his hand to his mouth for concealment until he had time to put in a substitute stud, usually made of wood.

The lip stud that is here shown, which weighs 18.5 grammes, has a base plate 3.4 cm long, and its cylinder is 1 cm high, with a diameter

[1] Nordenskiöld (12), pp. 83, 85 and (18), pp. 187—188.

7:Rosen E-5 (1901-1902) 1924 SF10 Chiriguano SF10

of 2.1 cm. It is decorated with one large and many small, turquoise-blue beads made of glass or porcelain.

Necklaces of stone or glass beads are worn by the women, and even men may occasionally be seen with them. One such necklace (fig. 198), which I bought of a Chiriguano Indian in the San Luis district, consists largely of pierced, cylindrical or laminate, turquois beads of exactly the same kind as I found when excavating the ancient site at Tolomosa in the Tarija valley.[1] The Chiriguano keep all stone beads they happen to pick up on the ground, and also acquire them by barter from other districts. Besides turquoise beads, there are also blue, white, and red glass-beads threaded on this necklace, which to me proved a particularly costly bargain. It is probable that such necklaces as wholly or in part are composed of ancient beads are looked upon as amulets. To this question I shall refer later, in connection with my account of the supposed magical properties of certain Choroti objects.

Fig. 198. Necklace of turquoises and glass-beads. Chiriguano. Bolivia. 1/2. Riksm. 03. 3. 905.

Fig. 199. Tweezer-like breast ornament of silver. Chiriguano. Caiyperdi. Bolivia. 1/2. After Erl. Nordenskiöld.

In the important work entitled »Comparative ethnographical studies», Erland Nordenskiöld describes, from the Chiriguano, an interesting breast ornament called »boivéra» (fig. 199), which I have not myself seen in use. It is of silver, doubled over tweezer-fashion, and worn on a string round the neck. Such tweezers, usually ornamented, are nowadays not put to any practical use, but exclusively worn as ornaments. The leaves of these tweezers are, therefore, sometimes hammered together. On good grounds Nordenskiöld advances his opinion that these ornaments originate from the small tweezers, or pincers, that, already in pre-Spanish times, were used by the Andean Indians for removing hairs of the beard, or

[1] von Rosen (3), p. 367 and fig. 332: 23—25.

7: Rosen E-5 (1901-1902) 1924 SF10 Chiriguano SF10

301
174
412
[302]

other inconvenient hair-growth, and which are still in use among the Chiriguano.[1]

I have noted a circumstance, previously unheeded, that, in my opinion, gives considerable weight to Nordenskiöld's theory as to the true Indian origin of the boivéra ornament. All breast ornaments of this kind have in their upper part a tubular horizontal perforation, open at both ends. In the middle of this barrel, and through the top, there is a hole. Through this barrel and upper hole is run the cord by which the ornament is worn round the neck (fig. 199). This rather peculiar arrangement for fixing the cord on which the ornament is hung, is found in the majority of such ancient Indian hanging ornaments, whistles and flutes of stone, as were meant to be worn a string. As an example, the remarkable ancient Indian stone flute, found in the earth in the vicinity of Iruya,[2] has at one end been bored through (fig. 200) in a manner exactly corresponding to the arrangement for the cord in the boivéra. This cord-fixing adaptation does not, to my knowledge, occur in any European object. For this reason it may surely be considered as very probable, not only that the original use of the boivéra as a pair of tweezers is of Indian origin, but also that the idea of carrying the tweezers on a string round the neck is Indian, and consequently has not originated from those more or less »white» jewellers that nowadays manufacture boivéra ornaments, and sell them to the Indians. I have in another book depicted a fragment of a small, pre-Spanish, ornamented bronze tweezers, which, like the boivéra, has a circular perforation at its upper end,[3] indicating that those tweezers, too, were worn on a cord, and consequently also in all likelihood served as a breast ornament.

[534]
[172]

Fig. 200. Two-pipe of stone. Ground-find from Iruya, Bolivia. 1/2. The dotted line marks the hole for fastening a string in the same way as for the breast ornament, fig. 199.

[439]

[1] Nordenskiöld (18), pp. 82—83, 92 and 94.
[2] von Rosen (36), pp. 147 and 148.
[3] von Rosen (36), fig. 211.

7: Rosen E-5 (1901-1902) 1924 SF10 Chiriguano SF10

CHAPTER VIII.

The Chiriguanos (2).

Industries. Cultivated plants. Hunting. Fishing. Vessels for food and drink. Intoxicants and stimulants. Music and dancing. Social order. Customs governing marriages, childbearing, illnesses, death and burial. Character and temperament. Belief in metempsychosis.

The Chiriguano are mainly an agricultural people, but they also do a certain amount of hunting and fishing. Maize is the most important of their cultivated plants, and it is very extensively grown by them. Many other Indian domestic plants are also cultivated, viz. pumpkins, sweet potatoes, beans, mani, cactus with edible fruit (Opuntia), tobacco, cotton, uruku (Bixa orellana), and a reed plant (Arundo donax) for making arrow-shafts. Of imported cultivated plants grown by the Chiriguano, I have seen melons, water melons, sugar cane and oranges. According to Nordenskiöld, they also grow figs and millet,[1] these latter of course also having been introduced by the whites. Nowadays, European spades and hoes are used for loosening the soil. Among wild-growing food plants the algarrobo tree (Prosopis alba) is, to the Chiriguanos, the most important one. The Indians also prepare from the fruit of this tree an intoxicating drink to which they are much addicted.

The Chiriguano larder does not to any great extent depend on hunting the game, but formerly hunting must certainly have been an important source of subsistence. Snaring is, nowadays, the 'only' method of hunting employed by the Chiriguano. The long-bow, the pellet-bow, slings, bird-nets and clubs are still occasionally used in hunting.

In olden times the Indians were good shots with the bow and arrow, and, according to Lizarraga, they then used bows the height of a man.

[1] Nordenskiöld (12), pp. 23 and 24.

Plate VII

343
335

Fig. 16
(I.C. 357) -- Chiriguano storehouse built on posts in Machareti

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412
415

Fig. 17
(I.C. 355) -- Scene in the Chiriguano town of Machareti. Boy dressed in a poncho. Large baked clay vessels and a mortar.

/19 cont./

C 415 As Figure 18, a and b, shows, these wooden dishes have two handles on the rim.

C Cs 412 [177] [439] As an eating utensil the Chiriguano and Chané today use metal spoons which are acquired from the whites. But they also use wooden spoons (85).

85. Nord. 2, p. 56. Nordenskiöld, Erland: Vergleichende ethnographische Forschungen I. Eine Geographische und ethnographische Analyse der materiellen Kultur zweier Indianerstämme in el Gran Chaco /Comparative Ethnographic Investigation I. A Geographic and Ethnographic Analysis of the Material Culture of Two Indian Tribes in the Gran Chaco/, Göteborg, 1918, p. 93. (Cited in what follows: Nord. 3.) Métraux I, pp. 364, 374-376, and Figs. 42 and 43.

C Ce [113]

C 412 /20/ Wooden Spoons (kuruha) of the Chiriguano

I. A. 353. (Gift of Doña María F. de Casati.) Length 36 cm.
I. A. 498. (Max Schmidt trip.) Length 42.5 cm. (Fig. 20).
I. A. 499. (" " ") Length 16 cm. (Fig. 22).

C [171] As Figures 20 and 22 show, there are variations in the shape of these wooden spoons. The shape of spoon I. A. 499 is almost exactly like the Chané spoon shown in a drawing by Nordenskiöld (86), while the shape of spoon I. A. 498 is very

86. Nord. 3, p. 93. Fig. 34 F.

similar to the spoons found in the ancient burials of the Peruvian highland, their front part and handle forming a rather straight line.

/20 cont./

Cc 412 17

Although it may be that the shape of the wooden spoons of the Chiriguano and of the Chané may have been influenced in many cases by the shape of the metal spoons acquired from the whites, we must nonetheless regard it as a product of the indigenous culture of South America that in pre-Columbian times had been rather widespread generally among the Andean cultures. Its appearance is quite limited among the native tribes of South America, setting aside the cases where it has been imported by the whites. But it is quite common among the Indians of the regions near Chiriguano territory in particular, for example, among the Tapieté and many other Chaco tribes, such as the Toba, Matako, Churupí, and especially also among the Mojo and, farther to the east, among the Guató. It must be supposed that the Chiriguano received this cultural possession directly or indirectly from the culture of the Andean montaña.

Cc 237 415

Shells (inta) as Eating Utensils

I. A. 734 and 735. (Izozó.) Length 12 cm. and 10 cm.

Outside of the spoons mentioned, the Chané-Izozó also use shells as eating utensils.

Cc 415 [824]

As vessels for drinking water and chicha, they above all use cuyas /vessels made from gourds/ (cf. Figures 24-26 and 149: 150; 153) and calabashes (cf. Figures 42 and 151). For the chicha festivities this beverage is ordinarily taken out of the painted baked clay pots in cuyas with designs on them, which are passed around among those present. Of the cuyas that I acquired from the Chiriguano in Machareti many have either incised or pyrographed designs, with which I shall deal in the chapter on art. The cuyas received from the Izozó do not have designs on them, which is easily explained by the peculiar circumstance that the Izozó were at that time living near Toledo. Three of the calabashes received from the Izozó (cf. Figure 42 c) were made from the fruit of the

C 415 126 531

Cc 415 [531] [824]

Plate VIII

415

Fig. 18

412

415

Fig. 19

Fig. 20

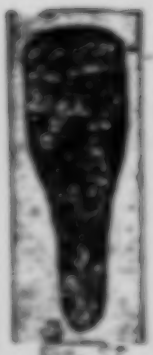

Fig. 21

Fig. 22

296

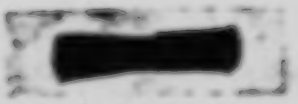

Fig. 23

/The captions are on p. 55./

R: Schmidt-52 E-5 (1935) 1938 SF10 Chiriguano SF10
Chane SF8
Izozo

/Captions for Plates VIII and IX./

Plate VIII

C 415

Fig. 18. a (I. A. 497): wooden dish (Chiriguano), diam. 30 cm.
b (I. A. 496): wooden dish (Chiriguano), diam 23 cm.

Fig. 19. (I. A. 574.) Wooden platter (Chiriguano), length 83 cm.

C 412

Fig. 20. a (I. A. 578), b (I. A. 576): wooden spatulas for stirring foods and drinks (Chiriguano), length 66.5 cm. and 114 cm.
c (I. A. 498): wooden spoon (Chiriguano), length 42.5 cm.

Fig. 21. (I. A. 502.) Spatula for stirring foods and drinks (Chiriguano), length 24.5 cm.

C 276

Fig. 22. (I. A. 499.) Wooden spoon (Chiriguano), length 16 cm.

Fig. 23. (I. A. 511.) Wooden pipe (Chiriguano), length 10.5 cm.

Plate IX

C 415

Fig. 24. (I. A. 457.) Decorated cuya (Chiriguano), length 23 cm.

C [415]

Fig. 25. a (I. A. 666): cuya with sewing (Izozó), length 19.5 cm.
b (I. A. 460): decorated cuya (Chiriguano), length 20 cm.

Fig. 26. Decorated cuyas (Chiriguano): a (I. A. 452), length 10 cm.; b (I. A. 456), length 11.5 cm.;
c (I. A. 454), length 5.7 cm.; d (I. A. 458), length 15 cm.; e (I. A. 451), length 14 cm.

8: Schmidt--70 E-5 (1935) 1938 SF10 Chiriguano SF10
Chané SF8
Izozo

Combs (kívua) in the Collection

C
Ce
412
322
[126]

I. A. 740. (Found on the road between Capirenda and Garrapatal. Length 9.5 cm. Width 9 cm. (Fig. 29a.)
I. A. 1327. Izozó. Length 7.5 cm. Width 3.5 cm. (Fig. 29b.)

The two combs in the collection, coming from the Izozó, represent two completely different types of comb. To the first type belongs the comb I. A. 740, which is made up of some little wooden sticks held together between two transverse pieces of cane interwoven with threads. (Cf. Fig. 29a.) The comb of the second type, I. A. 1327, has simply been carved from a single piece of flat wood. (Cf. Fig. 29b.) A comb similar to I. A. 740, coming from the Chané, is shown by Nordenskiöld in a drawing (122). The three Chiriguano

C
412
322

122. Nord. 1, Fig. 109.

combs shown in a drawing by Nordenskiöld (122) /see footnote 122 above/ belong to the second type and have been carved from wood, like the Izozó comb I. A. 1327. But in contrast to this one, the upper parts of their backs have been carved. Likewise the Chiriguano combs shown in drawings by v. Rosen and Métraux (123) are decorated with such carving.

123. V. Rosen, op. cit., Fig. 196.
Métraux I, Plate 87.

C
Ce
412
322
191

Up to now there has been some doubt as to how these two different types of combs might be distributed among the Chané and the Chiriguano. According to Nordenskiöld (124),

124. Nord. 2, p. 81.

the Chiriguano only have combs carved from a single piece of wood, and the Chané commonly have the type of comb with small sticks and rarely the simple comb carved from wood.

8: Schmidt--71 E-5 (1935) 1938 SF10 Chiriguano SF10
Chane SF8
Izozo

/28 cont./

V. Rosen and Métraux found among the Chiriguano combs made of little sticks (125), and, as already mentioned, I obtained these

125. V. Rosen, op. cit., p. 202. Métraux I, pp. 467 and 468 and Fig. 123.

two types of comb from the Izozó. According to this, I believe that we must decide the question of the manner by which the two types of comb appear simultaneously among the Chiriguano and among the Chané, but noting first that among the latter the comb made of little sticks is more common and among the former the wooden comb is more common.

Because the diffusion of simple combs carved from wood, like those that the Chiriguano and the Izozó-Chané have, is relatively restricted among the other tribes of South American natives, while this type of comb was known to the ancient Peruvian culture, we must also include this cultural possession among the ancient Peruvian influences (126). The combs fitted

126. Nord. 2, p. 81.

with little sticks, which we know from the Chané and the Chané-Izozó, are different from such combs used by most of the Chaco tribes, for example, by the Churupí /Chulupi/ and the Maká /Maca/, not only with respect to its material but also with respect to its method of manufacture. But I do not accept Nordenskiöld's opinion, according to which those Chané combs are different, in that they are only usable on one side, from those of the Chaco tribes, which were usable from both sides (127). The Chaco Indian combs furnished with little

127. Nord. 1, p. 204. Métraux I, p. 467.

sticks that I am familiar with are also used only on one side for combing, inasmuch as the other side is the handle. We can be quite sure of that because the little sticks of cane that form the teeth of the comb are pointed at only one end. The

Es 412 301 302 178

/29 cont./

Because of this change the implement for plucking hair, consisting of small tweezers, formerly very common, has naturally lost a great part of its importance today, and similarly, in its transformed state as a chest ornament, it is rarer. I found such tweezers among the Mataco and the Churupí. Unfortunately I did not succeed in acquiring such tweezers or the corresponding chest ornament, called "boivera" also by the Chiriguano. Nordenskiöld describes these tweezers in detail (131),

131. Nord. 2, pp. 81 and 82.

and he adds that the Chiriguano also use small sticks of cane to pluck out hair.

C 412 301 171

The form of these tweezers made of metal corresponds to that of the tweezers known through finds made in the burials of the ancient Peruvians. Today these tweezers are normally made of any piece of tin plate or sheet iron, which, when provided with a cord, they use for chest ornaments, besides their original purpose. This custom of using tweezers as a chest ornament was very common among the ancient Peruvians. Among the latter's necklaces there are many that, apart from other things, consist of silver tweezers. It was customary among the ancient Peruvians that these enlarged tweezers, unsuitable for their original purpose, be transformed into a pure and distinctive ornament. The Museum of Ethnography in Berlin has such ornaments in the form of depilatory tweezers, made of copper, silver, or gold, in great number, one example of C 301 [174] which is 52 centimeters in length (132). Therefore I suppose C [113]

132. Cf. Max Schmidt: Kunst und Kultur von Peru, Berlin, 1929, pp. 83, 369, 397, and 399.

we must deduce that the Chiriguano custom of using as a chest ornament a silver ornament in the form of one of these tweezers is due to ancient Peruvian influence. There are several specimens of the "boiveras," now rare and doubtless most of the time carefully kept from the view of the whites, in

/37 cont./

The sort of agriculture which these Indians commonly practice is that which we can define with the term "el rozado" /the clearing/, which best corresponds to the technical German word "Waldrodung," which is used for this concept. A piece of woodland is cleared, and the land cultivated in this manner is planted as many times as possible until it is exhausted. According to Métraux (173), the place intended

173. Métraux I. p. 334.

for planting is first cleared of underbrush, which is cut with a large stick edged on both sides, and this is burned on the site. Métraux /38/ has also compiled from the literature the respective statements on the method of planting maize (174).

174. Métraux I. p. 337.

Almost all the implements used for this cultivation, such as spades and iron hoes, have been obtained from the whites. The wooden spade, which the Chiriguano doubtless received from the culture of the ancient Peruvians and which was formerly universally used by them, is very rare today (175).

175. Nord. I. p. 188. Métraux I. pp. 335 and 336.

According to Nordenskiöld, these spades were made of a hard wood and had an artificially formed handle. Two such spade handles with a special handhold at the upper end are drawn in drawings by Nordenskiöld and two similar ones by Métraux (176).

176. Nord. I. Fig. 89. Métraux I. p. 336. Figs. 3 and 4.

In the Chané legends written down by Nordenskiöld, there is also mentioned, in addition to the spade, the wooden punch, which is a very common agricultural implement among most

Ft Belknap--06 8-5 (1935) 1936 SF10 Chiriguano SF10
Chané SF8
Izozo

/20 cont./
of the Indians of South America who have agriculture. In one of these legends it is told that (177) Tunpa, after having

177. Nord. I, p. 320.

created the grandparents of the Avá (Chiriguano) and Chané, gave them a wooden spade and a long carved stick, called "tarumpa," and bows and arrows so that they might feed themselves with these implements. In the other legend it is told that the jaguar goes to get the punches when the fox wants to help him plant his field (178). From the indications

178. Nord. I, p. 298.

by Métraux mentioned in the foregoing, it follows that the Chiriguano still use such an implement in their agriculture.

The Chiriguano in Machareti had some plantings near their town, but, because of the extraordinary drought at that time, these had produced nothing. The Izozó near Toledo had cleared large areas, but were unable to plant for the same reason. According to Nordenskiöld (179), the large

179. Nord. I, p. 183.

plantings of the Chiriguano and the Chané are often far from their towns and are enclosed by thickets.

The Raising of Livestock

Of the domestic animals native to South America, the Chiriguano and the Chané have the South American dog, which today is mixed with the blood of European dogs (180).

180. Nord. I, p. 197, Nord. 7, p. 49.

St Schmidt--149 E-5 (1935) 1938 SF10 Chiriguano SF10
Chané SF8

/37/

Grinding the Raw Materials

C Cc 252 412

For grinding raw materials, principally for grinding corn, the Chiriguano and Chané use large wooden mortars with long pestles (255). Such a wooden mortar is shown in Figure 15 and

255. Nord. I, p. 51. Métraux I, p. 365. Fig. 30.

C Cc 412 [191]

another one by Nordenskiöld (256). Stone mills are not used by

256. Nord. I, Fig. 116.

these Indians, although this implement was used, except for the Chaco tribes, by all the tribes whom the Chiriguano had as neighbors after their migration to the west. According to Métraux, a small stone mill is used only for grinding the seeds of a plant which the Chiriguano use as soap for washing their hair. Such a stone mill is shown in a drawing by Métraux (257).

C [515] [388]

257. Métraux I, p. 467. Fig. 122.

C 417 197 174

Because the wooden mortar is common even today among the Kaingué /Caingua/, who also belong to the Guaraní linguistic group, and is also mentioned for the ancient Tupinambá /Tupinamba/ of the eastern coast of Brazil, we can assume that the Chiriguano brought this cultural possession from their native land.

C Cc 252 412 [191]

The fact that mandioca is not important in the economy of these Indians explains why they do not use the wooden grater, the application of which is diffused among so many other Indian tribes of South America who cultivate this nourishing root.

Making Cord and Thread

C Ce 283

The thread that the Chiriguano and Chané make out of wool or cotton is spun by means of the spindle, while that made of caraguata is twisted by hand. We have no information on the way this caraguata thread is twisted.

R Schmidt--190 E-5 (1935) 908 SF10 Chiriguano SF
Chané SF5

/76 cont./

C 415 [412]

On the Cooking of Meals

Most of the Chiriguano and Chané utensils used /Plates XXXVI-XXXVIII appear here/ /77/ for cooking meals have already been mentioned in the preceding chapters, such as pots for cooking food and for fermenting chicha, dishes with holes in the center of the bottom for steaming maize meal, vessels for frying /fritar/ maize, wooden mortars with their pestles, and sieves. For frying /fritar/ meat or fish, the Chiriguano and Chané do not use the quadrangular or triangular stands which are so common among other South American Indians, but instead simple wooden spits (282). Also, as we have already

C 411 [412]

282. Nord. 2, p. 55. Métraux I, p. 332 and Figure 22.

said, the grater for grating manihoca roots is not found among these Indians.

We have yet to mention two other utensils used by the Chiriguano and Chané for fixing their meals, the large wooden dish and the spatula for stirring foods or drinks when they are boiling or fermenting.

C 415 [412]

C 415 126

Large Wooden Dishes (Platters) in the Collection

I.A. 574. (Chirig.) Lgth 0.83 m. Width 0.39 m. (Fig. 18.)
I.A. 575. " " 1 m. " 0.235 m.

Unfortunately I did not obtain data regarding the special use of these large wooden dishes which I acquired from the Chiriguano in Macharetí. As Fig. 19 shows, these large wooden dishes are provided with the same handles as the smaller wooden dishes which serve as vessels for eating.

Sr Schmidt--Md 8-5 (1901) 1910 SF 0 Chiriguano SF:0
Chane SFS

/77 cont./

C 412 122

Spatulas for Stirring Foods, Which Are in the Collection

I.A. 561. (Chiriguano) Length 49.5 cm.
I.A. 569. " " 74.5 cm. (Fig. 81)
I.A. 570. " " 114 cm. (Fig. 70b.)
I.A. 577. " " 80 cm.
I.A. 578. " " 62 cm. (Fig. 30a.)
I.A. 579. " " 85.5 cm.

C 412 122 C 412 153 (1911)

These wooden spatulas for stirring are used by the Chiriguano and Chané for stirring the bubbling cauk of maize when it is being fermented. Some of these spatulas have decoration on their handles similar to those of the corresponding spatulas of the Guaraní Indians. Nordenskiöld shows in a sketch such a Chiriguano spatula with a zigzag decoration (783), and beside

C 412 153 1911

783. Nord. 2, Fig. 17 A.

it (784) another form of these utensils, from the Chiriguano.

784. Nord. 2, Fig. 17 B.

which consists of the shoulder blade of a large mammal, attached to a wooden handle (785).

785. Nord. 2, p. 18. See Métraux 1, Figs. 33 and 34.

The Making of Fermented Drinks

C 273

Concerning the making of maize chicha, that is, the national drink of the Chiriguano, Nordenskiöld says the following (786):

786. Nord. 1, p. 237.

C [412]

"First the maize is /78/ ground up in large mortars, then sifted and boiled in large pots with water. A part of this mash,

St Schmidt--704 E-S (1905) 1958 SF10 Chiriguano SF10
Chaine SF8

/78 cont./

C 293 removed from the pot, chewed up and well mixed with saliva, is then mixed back in with the rest. Then it is strained and fermented in large open pots, at moderate heat. By means of large wooden spatulas or mammals' shoulder blades fitted with wooden handles, the mash is stirred in the pot. We find a more detailed description of this process in the publication by Métraux (787).

C [412] [239]

787. Métraux I, pp. 385-389.

C Ce 251

The Preservation of Foodstuffs

Concerning the method of preserving foodstuffs, we know that the Chiriguano and Chané dry fish for future use, when fish are abundant (788). According to Nino (789), formerly meat

788. Nord. I, p. 189.

C [113]

789. Nino. F. Bernardino de Ethografía Chiriguana. La Paz, 1912, pp. 949 and 950. According to Métraux.

from hunting was preserved for the great fiestas by drying it in the sun, without using salt. Even today, when a bovine animal is slaughtered, part of the meat is preserved by drying it in the sun (790).

790. Métraux I, p. 356.

E 501 CT13

Transport

The Chiriguano and Chané, in contrast to the Itatines-Guaraytú, do not have boats (791). Concerning means of

791. Nord. I, p. 186.